A STUDY TO DETERMINE THE OPTIMAL STRATEGY FOR RECRUITING AND RETAINING CIVILIAN RN'S ON SELECT UNITS OF THE FOURTH AND FIFTH FLOOR NURSING SERVICES AT WALTER REED ARMY MEDICAL CENTER

A Graduate Research Project

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The purpose of this study was to describe recruitment and retention strategies that could be used to improve the vacancy and turnover problems on select units of the nursing services at Walter Reed Army Medical Center. This study dealt with only civilian hires.

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CHAPTER I. INTRODUCTION

General Information

The ultimate goal of health care organizations is the successful delivery of quality care to patients, and in order to meet this goal adequate numbers of trained nursing personnel must be available. Providing adequate numbers of staff in times of labor shortage frequently requires intense effort and investment, but the alternative is grim. When recruitment and retention efforts are lacking, nursing units become revolving doors for the entry and exit of personnel, potentially adversely effecting patient care.

In the face of high labor costs, the shortage of nurses, and the effects on patient care, it becomes imperative for hospitals to use positive and focused action to recruit and retain nursing personnel. Management can make more informed decisions based on data and the results of research. This information can be used by management to direct resources into areas which yield overall improvement in staffing.

Reasons for the Study

Walter Reed Army Medical Center is a tertiary care facility located in Washington D.C., and one of the area's six university teaching hospitals. Numerous medical and surgical subspecialties are represented to treat and evaluate the diverse beneficiary population. The constant availability of nursing manpower is critical to the provision of care for these patients.

The Department of Nursing (DON) has supervisory and staffing responsibility for all registered, practical, and assistant nurses assigned to all inpatient units. At the time of the study there were authorizations for 521 nurses in the Department of Nursing and 439 assigned nurses for a total shortfall of 82 nurses. Of these vacancies, 62 were civilian positions and the remainder were military. The number of civilians assigned to the Department of Nursing was small in comparison to the number of military (119 versus 318), but the impact on the ability to adequately staff nurses was significant.

The staffing of civilian nurses at Walter Reed has become increasingly difficult since 1984. In 1984 there were

Table 1. Civilian Nurse Vacancies 1984-1987.

Number of Civilian Nurses	JAN 1984	SEPT 1985	OCT 1986	SEPT 1987
Authorized	174	180	180	181
Assigned	167	155	147	119
Shortfall	7	25	34	62

Source: the Monthly Nursing Activity Reports DA 4798-R and The Total Army Authorization Document.

approximately 7 civilian RN vacancies in full-time-equivalents (FTE) hospital wide. From 1985 to 1986 the number of vacancies increased from 25 to 34. The number continued to increase and reached a total of 62 in September 1987 (table 1).

During September 1987 the Fourth and Fifth Floor Nursing Services had 45 of the 62 civilian nurse vacancies (table 2). Many medical and surgical services are represented on these floors, including all of the critical care subspecialties.

Table 2. Vacancies by Floor, September 1987

	4th Floor	5th Floor	6th Floor	7th Floor	Other Areas
Vacancies	35	10	9	4	4
% Total	56%	16%	15%	7%	6%

Measures taken to improve staffing in areas suffering from severe shortages have been costly. For example, in 1987 contract nurse expenditures increased to $1.5 million on the 4th and 5th floors. Adjustments to meet workload requirements resulted in: 1) the reduction of the availability of inpatient beds on some units, and 2) the combining of two specialty care units (Wards 47 and 48). Supervisors in many areas have reported that the nursing shortage has affected the ability to deliver care to greater numbers of patients. Department chiefs are also worried about the effects on medical training programs. Initial interviews with supervisors in both the DON and the Civilian Personnel Office (CPO) revealed that turnover among civilian nurses has risen, and retention and recruitment incentives

were diminished by competition from local hospitals.

Based upon the above concerns, the Chief of Staff directed that this study be undertaken to determine the optimal strategy for recruiting and retaining civilian RNs to meet the needs of the institution.

Statement of the Problem

To determine the optimal strategy for recruiting and retaining civilian RNs on select units of the fourth and fifth floor nursing services at Walter Reed Army Medical Center.

Objectives

1. To perform a literature review identifying the current trends and issues pertinent to the research question.
2. To compute the turnover and vacancy rates for nurses by unit.
3. To analyze length of tenure of those who have left using available data and appropriate statistical techniques.
4. To analyze the recruitment program for nurses by the CPO.
5. To determine factors associated with job satisfaction and job dissatisfaction among nurses who are currently employed.
6. To determine individual characteristics of civilian nurses who are currently employed.
7. To make recommendations to improve the recruitment of nurses.
8. To make recommendations to improve the retention of nurses.

Criteria

1. A review of the literature will include both civilian and military sources.
2. Turnover rates for nurses will be computed for each floor and unit; and by clinical specialty, tenure, and grade. Vacancy rates will also be computed for each unit.
3. Analysis of individual characteristics of nurses who have left included tenure, clinical specialty, and grade.
4. Nurses surveyed will include those civilian nurses working forty hours a week on the 4th and 5th floor inpatient nursing units who have been employed at least 6 months.

5. The survey tool used will be one that is valid and reliable.

6. The analysis of individual characteristics of nurses currently employed will be a review of their age, tenure and experience.

7. The recommendations for improved recruitment will be based on the findings of vacancy analysis, CPO compliance with regulations, literature recommendations, and findings of the surveys of local hospitals.

Assumptions

1. The historical data depicting nursing strength and employment characteristics are accurate.

2. The labor market and demand for nurses in specialized positions (e.g. intensive care units) will remain unchanged.

3. The present salary structure for hospitals in the local area will remain relatively unchanged for comparable job classifications.

4. Measurement of job satisfaction assumes a relationship exists between satisfaction and the desire to remain employed.

Limitations

1. The resources available to the CPO for recruiting purposes were not equal to those of area hospitals.

Definitions

1. The term "nurse" as used in the study refers to licensed registered nurses.

2. Recruitment is defined as the process of filling vacant positions by internal and/or external search for qualified personnel.

3. Retention is defined as the ability to keep qualified people in positions.

4. Unit vacancy rates are defined as the percentage of vacant authorized full and part-time positions. The rate will be determined by dividing the number of Man Years Used by the Total Authorized positions and does not include overtime.

5. Turnover was defined as the number of terminations in one year, excluding those who retired and those who were dismissed. The rate will be determined by dividing the number of terminations in one year by the average number of Man Years Used.

6. Several terms used in the questionnaire,"Index of Work Satisfaction," are defined below:[1]

   a. Pay--dollar remuneration and fringe benefits received for work done

   b. Autonomy--amount of job-related independence,

initiative, and freedom, either permitted or required in daily activities

c. Task Requirements--tasks or activities that must be done as a regular part of the job

d. Organizational Policies--management policies and procedures put forward by the hospital and nursing administration of the hospital

e. Interaction--opportunities presented for both formal and informal social and professional contact during work hours

f. Professional Status--overall importance or significance felt about the job, both in the nurses view and in the view of others

Research Methodology

1. The first phase of the study included the literature review and interviews with DON and CPO supervisors. Interviews were conducted to ascertain the personnel staffing procedures and to obtain information about staff nurse job responsibilities and supervisory controls.

2. The second phase consisted of data collection to determine vacancy and turnover rates by floor, clinical specialty (intensive care, psychiatric, surgical) grade, and tenure. Turnover rates were calculated by dividing the number of terminations in one year by the average number of

Man-Years used. Vacancy rates were determined by dividing the number of Man Years by the number of total authorized positions. Comparison of turnover rates with those of previous years were made using chi-square technique to determine if there the year of turnover was independent of the rate of turnover.

3. In the third phase, analysis of recruitment efforts was done using descriptive techniques. Comparisons to other hospitals and areas was done using measures of central tendency as indicated.

4. In the fourth phase individual surveys were administered. Data analysis was consistent with the methods described by Stamps and Piedmonte, the developers of the survey.[2]

a. Paired analysis was done using a frequency matrix, calculating component weight coefficients, obtaining Z values, and ranking components in order of importance.

b. The attitude score was compiled by a.) summing the scores of the 44 items then deriving a total mean score, b.) summing the scores for the component factors, then deriving a mean score for the components.

c. Final weighted values, or adjusted scores, were calculated by multiplying the component mean score by the component weight coefficient.

d. Measures of central tendency were used to describe differences in the job satisfaction scores by age, floor, level of education, and tenure.

e. The frequency distribution of questions were analyzed using pre-selected, arbitrary indicators of dissatisfaction.

LITERATURE REVIEW

"Among the most urgent, controversial, and troublesome issues to recently emerge and confront nursing is the present and anticipated worsening shortage of nurses to fill the variety of positions for which they are needed."[3] This statement, made in 1981 by the National League for Nursing, is being echoed today by health care institutions nationwide. According to the National Sample Survey of RNs, 1.7 million of the nation's 1.9 million nurses are working, and almost two-thirds of them are practicing in hospitals.[4] But despite the participation of workers, the nationwide vacancy rate for nurses in December 1986 was 13.6%, nearly double the rate for 1985.[5] Locally, the Maryland Hospital Association reported that 14.2% of all nursing jobs at suburban Washington facilities were vacant.[6] While the number of males seeking to enter the profession remains low, female enrollments in nursing schools have decreased and a greater number of past candidates have enrolled in programs outside of nursing. In response to the declining enrollments a number of nursing schools have closed making the pool of future replacements even less than in the past.[7]

In response to the current labor shortage many management strategies have been used. Some facilities have chosen to close

beds, units, or services to adjust to lower staffing levels. Other facilities have opted to provide some relief by the use of supplemental staff through contract or agency arrangements, or concentration on recruitment efforts.[8-9] Retention strategies must be coupled with relief measures in order to retain adequate numbers of staff and avoid costly turnover. Unless adequate working conditions are provided, nursing units can become revolving doors for the entry and exit of personnel. The implications were well stated by Moss, who wrote, "The challenge to hospital and nurse executives is to identify those factors within their facilities that lead to job dissatisfaction--factors such as work environment, degree of autonomy, and salary--and then work to change the negative factors that are under management's control".[10]

Management strategies must target specific areas to make cost effective and appropriate decisions when attempting to improve the stability of the workforce. Recruitment costs are estimated to be $8400 per full-time-equivalent nationally.[11] Training, incentives, benefits, and increased salaries have obvious costs associated with them. These costs must be weighed carefully by decision makers in the hospital.

One strategy used in making cost effective recruitment and retention decisions has been to identify specific areas of need (units, occupations, specialties), and then determine the interventions which are most likely to bring about the desired

results. The literature also indicated there were a number of other reports and tools available for managers to use in making these decisions.

Turnover reports have been described as good barometers of what is happening in the employment picture. Turnover rates can describe the numbers and types of personnel leaving, and can point out "soft spots" in the employee program.[12-13] Vacancy rates point out the areas or types of personnel needed for recruitment. High vacancy rates may indicate soft areas in the recruitment program or institutional attributes that are not competitive with other hospitals.

Exit interviews with individuals leaving an organization are another type of management tool. These interviews may point out difficulties within the organization which can be managed to reduce turnover. Literature recommends that these surveys be done by managers in person at the time the individual is leaving to help discern the real motives behind termination.[14]

The question of why some nurses stay and why others leave has been studied intensely by scholars. Studies of turnover and retention have used various models, means of analysis, and comparisons of different groups of nurses. The subjects of retention and turnover are complex. Some of the same variables that affect turnover have been found to be associated with retention. Indeed, most studies have used multiple variables to account for turnover and retention.

One of the most common measures used to predict turnover and retention is the degree of satisfaction with work. The major assumption in these types of studies is that satisfied nurses will remain with an organization, and dissatisfied nurses will leave. This hypothesis has not always been supported. In a number of job satisfaction studies in the past five years, job satisfaction typically explained less than 26% of the variability in employee turnover.[15-18] People left organizations for reasons other than dissatisfaction. So information about satisfaction in the workplace should be used cautiously and should not be depended upon as the sole predictor of employee turnover.

Other authors have suggested that while dissatisfaction may not always result in an employee leaving, satisfaction appears to correspond to an employee staying. Herzberg was one of the first to write that, among other variables, high satisfaction appeared to be related to tenure.[19] Case reports in the last few years have indicated that satisfaction with management characteristics, work environment, and organizational programs are important factors influencing employees to stay.[20-26]

Personnel surveys using satisfaction indicators are also used to isolate staff concerns. Factors causing low satisfaction can indicate areas requiring management review. Intervention by managers to improve satisfaction and increase retention is the ultimate goal of using these studies.

The largest study of retention, also known as the "Magnet Hospitals Study" was done by the American Nurses Association in 1983.[27] It was a descriptive study of hospitals selected for their ability to attract and retain professional nurses. The staff nurses interviewed were consistent in recognizing the following attributes as important for retention:

1) strength and knowledge of nursing leadership
2) good relations between administration and staff
3) satisfaction with staffing patterns
4) ability to practice quality nursing care
5) support from resources such as supervisors and head nurses
6) good orientation programs and continuing education

Another study of retention was performed by Prescott in 1986. This study looked at several variables which were believed to contribute to retention. The results of the study showed seventy-five percent of the variability in retention was described by the level of staff experience, proportion of nurses working full time, job satisfaction, and working conditions.[28]

The findings of these studies on retention demonstrate that a multitude variables effect the employees decision to remain with the organization. These may involve satisfaction with the job, or other environmental, organizational, and management characteristics.

Describing the components of work satisfaction has been the subject of research proposals in recent years. Many facets of employment satisfaction have been uncovered. Mottaz demonstrated nine work factors accounted for a considerable proportion of work satisfaction among nurses (R^2=.637). The most significant determinants were noted to be supervisory assistance, task involvement, task autonomy, and salary.[29]

Other studies of job satisfaction for nurses have been done using the Work Satisfaction Index by Paula Stamps and Eugene Piedmonte. This study was developed in 1978 and has been replicated and refined numerous times in the past ten years.[30] The components of work satisfaction for these studies were divided into six measures. These included 1) pay, 2) autonomy, 3) task requirements, 4) organizational policies, 5) professional status, and 6) interaction. Slavitt used these measurements in her study of 450 community hospital nurses. The nurse's responses indicated the order of importance of these elements. She found that the most important factor to nurses was autonomy, followed by professional status, pay, task requirements, interaction, and organizational policies.[31]

Two job satisfaction surveys of civilian RNs at Walter Reed have been done in the past two years. One was conducted in the summer of 1986 using 135 civilian RNs (response rate 74%). The survey included 12 items related to work satisfaction and allowed space for additional comments.

The mean scores indicated that nurses were most satisfied

with the of quality care given, their professional role, and the opportunity for growth and development. The scores showed that nurses were least satisfied with parking, salary, and the quality of support services. Limitations to the study included 1) the instrument's validity was based on face value alone, and 2) the survey questions were biased towards satisfaction.[32]

The second survey was distributed by the CPO during November 1987. It attempted to determine ways to improve recruitment and retention. Suggestions for recruitment included advertising, improved salary rates, and an increase in outside recruitment trips. Factors listed as "greatest concerns" included parking, low salary, and limited upward mobility. The validity of the instrument was also based on face value, rather than being tested. It was not coordinated with nursing and the responses were biased towards negative attributes of employment.[33] After reviewing these studies and their limitations it was concluded that a number of factors are related to satisfaction and turnover at this medical center. It was also concluded that a study using reliable and valid measures should be conducted to determine the significance of these factors.

Demographic characteristics also appear to be related to satisfaction and indirectly to retention and turnover. Younger groups of nurses and those who are new graduates seem to have had the highest rates of turnover.[34] These groups of nurses (usually less than 32 years of age) also tend to have the lowest levels of satisfaction. The education level of the nurse also appears to

be related to satisfaction. That is, the higher the level of education, the lower the level of satisfaction. [35] These generalities should be considered when interpreting the results of satisfaction studies.

Recruitment of nurses was a major concern for the U.S. Army Health Services Command (USA HSC) during the 1980 time frame. The CPO activity of the USA HSC sent a written to request all MEDDACs and MEDCENs to identify problems with nursing recruitment. The letter also asked respondents to mention any solutions being used to correct problems. The Civilian Personnel Officer at WRAMC responded that several policy changes had begun on a trial basis. These included a choice of two rotations instead of three, choice of specialty assignment, interviews on a walk in basis, advertisement in local papers, and a four week advance notice on schedule changes. These measures were reported to result in an increase in prospective employees (Appendix A).

Studies and surveys which isolate factors thought to improve retention are useful tools for managers. Identification of methods must be tempered with the knowledge that not all turnover is bad and not all retention is good. If the cost of preventing turnover exceeds the cost of turnover, and if those who are leaving are not the most skilled or desirable personnel, then management may not benefit by intervention.[36]

The issues influencing staff decisions to stay or to leave are complex. No one method or solution may resolve all of the problems associated with understaffing.[37] Decisions to change

programs must made in light of the costs of retention programs as well as the benefits to the organization. Management strategies must be targeted and discriminating. They must seek to determine the most appropriate and effective ways to promote tenure within the constraints of the organization. Certain management tools, e.g. analysis of turnover rates, vacancy rates, exit interviews, and personnel surveys, can be used to gain an understanding of personnel employment patterns. The findings of these studies can then be used by management to improve recruitment and retention programs so that adequate numbers of nurses are available to deliver patient care.

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CHAPTER II. DISCUSSIONS.

VACANCIES

As referenced earlier in the study, the Department of Nursing is a complex organization which manages nurses throughout this large medical center. The fourth and fifth floors were the focus of analysis because these floors had 45 of the 62 vacancies in the department (table 2). In order to determine where these vacancies were occurring an analysis of vacancies was conducted. The purpose of the analysis was to identify whether there were particular units or particular grades where vacancies were occurring. By identifying chronically hard to fill areas, recruitment efforts can be targeted and be more specific in their application.

Analysis of Vacancies

In order to determine the number and types of nurses needed for the fourth and fifth floors, annual vacancy rates were computed. Table 3 shows this data for the period October 1986 to September 1987. The vacancy rates shown are the ratios of assigned to authorized positions.

Table 3. Vacancies by Unit, September 1987

UNIT	AUTHORIZED	NUMBER VACANT POSITIONS	ANNUAL VACANCY RATE
40	6	2	6%
41	5	3	40%
42	12	2	10%
43	3	0	0%
44	3	0	0%
45	15	10	42%
46	12	6	35%
47	4	1	4%
48	4	1	2%
48d	4	1	8%
49	10	5	46%
Ambulatory Surgery	2	1	21%
Recovery Room	3	0	0%
Subtotal	83	35	
51	10	4	36%
52	no authorizations		
53	1	0	0%
54	3	0	0%
55	1	0	1%
56	3	1	14%
57	4	1	11%
58	5	4	42%
Subtotal	25	10	
Total	108	45	

The "Annual Vacancy Rate" column represents the percentage of vacancies over the period of one year. Calculations were performed by dividing the number of Man-Years authorized by the cumulative monthly number of Man-Years used. Higher rates in this column demonstrate the severity of the shortage over the past year. A closer looked showed that a few units in

particular had most of these vacancies.

The data indicated that six of the 21 units had an annual vacancy rate of over 30%. These six units included the coronary intensive care step down unit (41), the surgical intensive care unit (45), the cardio-thoracic intensive care unit (46), the medical intensive care unit (49), the pediatric unit (51), and the neurosurgery unit (58).

The "Number Vacant" column in table 3 represents the actual number of authorized positions which were vacant as of 1 September 1987. These numbers were shown to illustrate the current situation. The data demonstrated that five of the 21 units had four or more vacancies. These five units were 45, 46, 49, 51, and 58.

From this analysis it was determined that certain units, i.e. 45, 46, 49, 51, and 58 were "hard to fill areas". Each of these units have had an average vacancy rate of 30% or more for the past year and are presently short four or more nurses. The chronic and current shortages suffered on these units suggest that they should be the focus of recruitment and retention efforts. Particular emphasis will be given to these areas when discussing recruitment and retention because they represent hard to fill areas as well as being critical care areas within the hospital.

Further analysis consisted of looking at the GS ratings of the vacant positions. The purpose of this analysis was to determine if a greater number of vacancies existed in any particular grade.

The data, shown in table 4, indicated that their was not a great disparity in the percentage fill for either particular grade. There were slightly more GS 9 positions and slightly more GS 9 vacancies.

The same type of grade analysis was done looking at the hard to fill areas (45, 46, 49, 51, 58). Table 5 shows the data for these areas.

Table 4. Vacancies by Grade

	GS 9	GS 11
Total Authorized	57	47
Percentage Authorized	54%	45%
Total Vacant	30	23
Percentage Vacant	56%	43%

Table 5. Vacancies by Grade in Critical Shortage Units (45,46,49,51,58)

	GS 9	GS 11
Total Authorized	22	28
Percentage Authorized	44%	56%
Total Vacant	15	17
Percentage Vacant	46%	53%

Again, the analysis did not reveal any great disparities or shortages in any particular grade. There was a slightly greater percentage of authorizations for GS 11 positions and slightly more GS 11 vacancies.

From the analysis of vacancies by grade it was concluded that there is not a wide disparity in the proportion of vacancies for grades 9 and 11. There does not appear to be a migration of personnel from one grade to another. Personnel do not appear to be looking to move into or out of any grade in particular.

Summary

In September 1987, civilian nurses represented 119 of the 437 nurses assigned to the Department of Nursing. Of the 82 total nurse vacancies in the department, 62 were for civilian nurses. In order to focus management and recruitment efforts, the units with the highest number of vacancies and the highest annual vacancy rates were identified. The data accumulated in this analysis of vacancies has revealed that nurse shortages were particularly acute on five units within the fourth and fifth floors. The fourth and fifth floor contained 45 of the 62 civilian nurse vacancies (73%), The five units accounted for 30 of the 62 vacancies (48%). Three of the five areas that are hardest to fill are intensive care areas (45, 46, 49). These intensive care units held 21 vacancies. The other two units found most difficult to fill were pediatrics (51) and neurosurgery (58). These units had a total of 9 vacancies.

An effort was also made to determine if the vacancies were occurring in any particular grade. The data revealed that there were vacancies both in the GS 9 and 11 positions,

and the vacancies seem more closely related to the type of nursing unit than to the grade of the position.

Recruitment of nurses to fill the areas of highest vacancy should be a priority in the recruitment program. However, this task will not be easy as other studies have indicated. One reason is a shortage of nurses trained in critical care services. The National Association for Health Care Recruitment (NAHCR) survey in 1987 listed intensive care units and coronary care units (ICU/CCU) as the most difficult nursing units to fill.[1] Both nationwide and in this region WRAMC is competing for these difficult to hire nursing positions. The findings of this analysis are consistent with this survey finding.

The recruitment plan for nurses and characteristics of the institution are two of the most significant factors impacting on a hospital's ability to attract nurses.[2] In view of the current number of vacancies and the detrimental effects on the organization a review of the recruitment plan was indicated.

RECRUITMENT FOR NURSES

The recruitment plan is an important tool for gaining employees. It must be based on solid information, quantifiable and realistic goals, and a method for evaluating success. The literature suggests that salary and benefits are key institutional attributes effecting recruitment efforts.[3] Other intangible measures include job content, professional advancement, and staffing and scheduling practices. These factors and other institutional characteristics may weigh heavily in an individual's decision to accept employment.

The success of the recruitment plan depends upon representation of many disciplines. Key personnel include the command group, nursing executives, medical staff, CPO, and public relations staff. The CPO at WRAMC has the primary responsibility for development of the recruitment plan. However, the nursing executive is considered the single most influential individual in the hospital's recruitment and retention effort.[4]

Analysis of the current recruitment plan began with a study of the recruitment program. The purpose of the study was to analyze the factors affecting the formation, implementation, and evaluation of recruitment. Information regarding the recruitment of nurses at WRAMC was collected from interviews, historical documents, and observation.

The period of data collection was during September 1987 through January 1988. At this time the CPO was in transition,

and a new chief CPO, deputy chief CPO, and branch chief of Recruitment and Placement (R&P) were inprocessing and orienting. The Chief, DON had assumed duties only months earlier. Conversations with these individuals revealed that many system deficiencies existed. However, there was new involvement, concern and direction. Changes were underway. Key personnel spent many hours discussing and formulating the recruitment plan for nurses. The results of these efforts gradually began to be realized through the renewed strategies in the operations of the recruitment and placement (R&P) branch.

Internal Control of Recruitment Actions

The R&P branch is responsible for recruitment actions and carrying out internal and external recruitment programs. It is also responsible for the evaluation of the overall recruitment plan in coordination with key personnel.[5] The R&P branch has struggled with historical systemic and procedural problems in processing requests for recruitment action (SF 52's). Difficulties in these areas led to invalid requests, duplication of requests, and lengthy processing of recruitment actions. For example, during the initial review, CPO had recorded 80 recruit actions while the DON only claimed 62. Of the 80 recorded by CPO, 52 of these were over 120 days old. As a result of the long delays, several positions had been declined after individuals had been selected. No documentation was

available for analysis, but individuals from both CPO and the DON reported problems with these procedures.

Corrections to minimize the adverse affects resulted in the initiation of several actions. Representatives from the CPO and the DON began to communicate more frequently to assure actions were being processed through the system. The Table of Distributions and Allowances was reviewed by the representatives to ensure all recruitment actions were for valid positions. A tracking system for SF 52's was being installed so recruitment requests could be followed throughout the CPO and monitored in a timely fashion. The system also benefited from CPO management's review of reports which tracked actions through the recruitment process. These reports were started to call attention to delays requiring management attention.

It can be concluded that accurate assessment of manpower and internal management controls are vital for the success of the recruitment program. In order to enjoy continued success with the process, CPO management must be sure that recruitment actions follow these standards. Recruitment requests must be valid, SF 52's processed, and management reports scrutinized to avoid delays in recruitment actions.

Because of the pressing shortages noted in some nursing units, it was further concluded that communication between the CPO and the DON must continue to be emphasized. The chief nurse is in the key position to influence the climate of

decision-making, creative problem solving, and cooperative and collaborative efforts.[6] These positive and problem solving actions between the two activities are essential for improving recruitment in the hard to fill areas as well as in other areas.

In addition to assuring recruitment actions are correct and processed according to procedure, efforts must be directed toward recruiting activities.[7,8] A review of the external and internal recruitment program was conducted in order to determine how the programs were implemented and evaluated.

The Recruitment Program

Recruitment programs are driven by the numbers and types of personnel needed, and the available budget to fund programs. Before October 1987, there was no formal recruitment plan. External advertising consisted of two newspaper advertisements in association with ICU nurse training programs, and occasional free advertising spots on the radio. The only information for potential recruits was a two page black and white brochure.

Since the initial review of R&P more initiates have occurred. A budget was formulated to begin the plan. An external recruitment team was developed to fill critical specialties in all hospital positions and a nurse recruiter was appointed among the team members. Milestones for the recruitment plan were developed by the external recruitment team and coordinated with key staff members. The plan included external recruitment trips and in-house coffees coordinated with

the DON. Civilian nurses from the DON participated in recruitment trips to help communicate with potential recruits. These cooperative efforts also helped to establish stronger ties with the DON. The purchase of a WRAMC display booth for recruitment enhanced the visibility and image of nursing. Recruitment brochures were redesigned and printed.

Until these improvements, there had not been previous attempts to evaluate the success of recruitment activities. An initial evaluation of the new recruitment plan was formulated three months after these programs were operational. Table 6 lists the cost-benefit of the external recruitment strategies for October to December 1987.

Table 6. Recruitment Activities Oct-Dec 1987

Method	Number of Events	Cost	# Hired
Campus visit	3	$ 320	0
Job Fair	6	$9082	2
News Ads	1	$ 232	4
	TOTAL:	$9634	6

As shown in table 6, the costs of external recruitment trips during this period totalled $9634. These recruitment activities resulted in six hiring actions. The job fairs also included efforts for recruiting other hospital positions. The cost for nursing displays at job fairs was estimated to be about one third of the total amount, or about $3000.

The newspaper advertisement was specifically directed to nurses interested in attending a critical care course offered by the DON. As is shown, the response to this advertisement was very favorable. However, the course is offered only three times per year. Advertising performed only for this purpose will not meet the requirements for filling current vacancies.

It was concluded from this analysis that desirable improvements in the recruitment program have been made in the past months. Foundations for the recruitment plan have been built. The structure is founded on a budget, milestones and objectives. Efforts have been undertaken to assure that the recruitment actions are valid and performed in a timely manner. In order to ensure the recruitment program continues on course, communication and coordinated actions between the DON and CPO must continue.

The current external recruitment program may benefit from further investment into newspaper advertising. Ongoing evaluation of the investments into marketing and advertising must be made. The evaluation should include periodic computation of the cost of marketing and advertising, and the number of nurses hired from these sources.

Review of other institutional attributes and recruitment techniques is valuable to ensure recruitment and retention strategies are competitive with area hospitals. In view of the benefits to be obtained from this type of analysis, research in the competitive market was conducted.

Market Analysis

Routine market analysis is one of the essential steps in formulating the recruitment or retention plan.[9] The applications of the market analysis can be two-fold. First, information can be used as a basis for considering adjustments and modifications of programs. Programs and policies can be reviewed for competitiveness with area hospitals. Second, the market analysis can be used for tailoring external recruitment efforts to specific candidates. In order to remain competitive, the market analysis must be done on a regular basis.

There is no definitive technique or information required in an analysis. The analysis may be conducted in a simple fashion by calling area hospitals to determine salary rates. The analysis may also involve more complex techniques, such as hiring marketing firms to distribute surveys.[10]

The market analysis should take into account other factors in addition to pay and benefits. The analysis can include comparative job content, recruitment procedures, institutional attributes, or any other feature pertinent to recruitment and employment.[11] The effort going into the analysis is usually dictated by local policy, available budget, and the severity of the shortage.[12] Locally, the Washington Metropolitan Nurse Recruiter's Association (WMNRA) performs a market analysis which

is used by about 25 area healthcare facilities employing nurses. Results of their semiannual market survey are available only to the nurse recruiter and the top hospital administrator at each member facility. WRAMC recently bought a membership to the organization.

Another survey, done nationally, is conducted by the NAHCR. This survey reports national and regional trends in recruitment. Their last survey described recruitment programs by budget, benefits, salary, number of recruiters, as well as other characteristics.

The results of both the NAHCR and WMNRA surveys can be used to aid the recruitment program. At the local level they may be useful as a simple market analysis for comparing salaries. The survey results are also helpful for recruiters in determining a niche for their market strategy.

The intent of this review has been to determine strategies which could be used by WRAMC to improve its recruitment program. Because no current local market surveys were available interviews with six local recruiters were conducted. The interviews gave the writer an idea of the qualitative aspects that influence and enhance the recruitment program. The questions asked of the recruiters are found in **Appendix B.**

Organizational Features

As part of the survey, local recruiters were asked what they felt were the most important and attractive organizational features they offered. Their responses are listed in table 7.

Table 7 indicated that there were several organizational features which can be emphasized for recruiting purposes. Two facilities included salary as their important attractions. Three

Table 7. Three Most Attractive Organizational Features Reported by Nurse Recruiters at Six Local Hospitals.

FACILITY	RESPONSE
Washington Hospital Center	Weekend Alternative Schedule Salaries Tuition Reimbursement
Fairfax Hospital	Reputation Homogeneous Staff and Patient Population "Ultra" High Tech
George Washington University	Educational Benefits Linkage and Reputation to the Institution Salaries
DC General Hospital	Educational Experience Linkage to the University
VA Medical Center	Support from Head Nurses and Peers Investment in Retirement Teaching Atmosphere
Bethesda Naval Hospital	Name and Reputation of the Institution Feeling of Supporting a Worthwhile Cause Ability to Hire New Graduates

included benefits like tuition assistance, education, and retirement. Five of the six included institutional attributes, e.g. the use of high technology, reputation of the hospital, and teaching/university affiliations. Two felt that staff relations played a significant role in their ability to recruit.

There were many attractive organizational features mentioned that could be attributed to WRAMC. Advertisement and recruitment programs could be tailored to emphasize these features. Aspects such as the teaching atmosphere, feeling of supporting a worthwhile cause, educational experiences, or use of high technology are features that could be mentioned.

Salary Comparison

Further study of the market was conducted to view the competitiveness of salaries in the recruitment programs. A review of the salary structure of 12 area hospitals was performed and data was compiled. Three positions were compared using General Schedule (GS) equivalencies based on years of experience and level of education. **Appendix C** outlines these requirements.

Table 8 shows the starting salary rates for nurses in three clinical positions for October 1987. Information regarding the number or RNs and the number of beds was collected to give an indication of the six of the hospitals and the size of their staff. For WRAMC there are about 440 RNs for 887 beds. As can

be seen, these numbers and their proportions vary from hospital to hospital.

Table 8. Starting Salary for Nurses at 12 Area Hospitals.

# Beds	#FTEs	BSN one year (GS7)	Staff Nurse (GS9)	Clinical Specialty (GS11)
District of Columbia				
511	560	24,648	25,501	37,336
500	486	24,000	27,830	36,721
851	1100	23,650	30,742	38,000
535	926	23,504	28,621	33,426
828	305	23,190	24,750	27,172
250	220	20,176	24,960	32,240
Maryland				
650	440	21,986	24,733	33,551
375	294	20,800	24,482	34,327
229	369	20,259	26,520	34,320
310	300	20,322	23,442	31,387
450	451	19,867	25,367	37,294
Virginia				
350	645	23,936	27,997	37,440

Source: Interviews with local hospital nurse recruiters

As shown in table 8, the salary rates are presented in large groupings, making it more difficult to compare and interpret. Another table was arranged to simplify the comparison. Table 9 groups the salaries into ranges for each GS equivalent. The last two columns show the salary at the rate prior to the increase in January 1988, and then after the increase that month.

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Table 10 illustrates how WRAMC stood in relation to these hospitals before and after the pay increase. Before the increase, all the salary rates were at the bottom quartile. This means that 75% or more of the hospitals paid nurses higher salaries. The ranking changed after the increase. Salaries for the GS 7 position moved to the 3rd quartile, and those of the GS 9 positions moved to the 1st quartile. These indicate a more competitive standing for GS 9 equivalent nurses. The GS 11 positions did not improve in competitive posture.

These findings have several implications for recruitment. Earlier it was determined that the majority of vacant positions were for GS 9 (table 4). This position requires two years or more of experience. Efforts to reach these recruits should therefore focus on the employed market rather than on schools or career fairs. In areas of critical need, vacancies were mostly for GS 11 positions (table 5). Again, these positions are for more experienced nurses who would already be out of school. The analysis also indicated that pay rates for GS 11 grades, despite the recent increase, were still not as competitive. Rather than focusing on salary, recruitment efforts may experience increased success if there was more emphasis on institutional attributes and particular job features.

The analysis of vacancies performed earlier demonstrated the shortages for nurses were particularly acute in specialty areas. This aspect was not compared in the analysis of salaries. Future analysis should include the specialty of nursing in

addition to the years of experience and levels.

The recent increases have dramatically improved upon the old salary scales. Salary rates will need to be continually reviewed to observe the competitive standing and to assure the organization is taking the posture it desires. Besides attempting to match competitive salaries, recruitment efforts must focus on positive employment features. A comparison of benefits and other institutional attributes was performed to determine additional strategies that could be included in recruitment.

Comparison of Benefits

There were two purposes for looking at job benefits in this study. The first was to find out what types of programs were offered. The second was to make recommendations for accentuating WRAMC's recruitment program. In the survey of local hospitals, recruiters were asked to identify the types of benefit programs offered. The responses are noted in table 11.

The responses in table 11 revealed several positive attributes of the WRAMC program. These additional job features were not analyzed to determine if the expense of adding the feature was worth the investment of the institution. In large institutions the cost of adding job related benefits may equal or exceed wages. Changes to these programs require in-depth analysis.

Table 11. Types of Benefits Offered at Six Area Hospitals.

	Washington Hospital Center	Fairfax	GWU	DC Gen	Veterans Medical Center	Bethesda Naval Med Cen	WRAMC
Parking	Y	Y	L	Y	Y	Y	L
Shift Choice	L	L	L	L	L	N	N
Differential	Y	N	N	N	Y	Y	Y
Career Ladders	Y	Y	Y	Y	L	N	N
Child Care	N	L	N	Y	N	L	N
Travel/Conf	Y	Y	Y	Y	L	L	L
Health Ins	Y	Y	Y	Y	Y	Y	Y
Nurse Training Programs	Y	Y	Y	Y	L	N	Y
Educational Benefits	Y	N	Y	Y	N	N	N
Tuition Assist	Y	Y	N	Y	N	N	N
Retirement	Y	Y	Y	Y	Y	Y	Y

Source: Survey of Nurse Recruiters
LEGEND Y=YES, N=NO, L=LIMITED

The differential paid for shift work was reported to be paid by only half of the facilities. WRAMC pays a differential, which can be a significant portion of one's pay. Health insurance and retirement programs were offered by all facilities. Another positive attribute of WRAMC is the nurse training program, in

particular, the intensive care nursing program. The differences in these programs were not analyzed in detail.

It can be concluded from the above information that WRAMC does indeed have several competitive programs. These programs can be emphasized for advertisement and recruiting purposes. Among these are the salary rates for staff nurses in GS 9 positions, differentials offered for shift work, and the ICU training course. Emphasis on these features, and on the specialty requirements on units with critical shortages, should be key factors in the recruitment strategy.

The market analysis should be done at least yearly in order to be sure the recruitment strategy remains competitive. The recruitment branch may conduct it's own market analysis or use one developed by the local recruiting agency. After the analysis is completed, results should be reviewed and actions coordinated with the executive administration, DON, and CPO at WRAMC, as well as counterparts at HSC. Once the competitive posture is formulated, the recruitment branch must then determine how to market the program to potential recruits.

Marketing and Advertising

Marketing and advertising are necessary to compete in today's environment. The purpose may be to recruit for specific positions or to enhance the hospital's image.[13] It would be ideal to use every means of advertising to reach potential applicants, but there are usually constraints in the recruitment budget. Therefore, the most successful and targeted approaches should be used. The experiences of recruiters have indicated a few modes of recruitment are more successful than others.

The NAHCR survey in 1987 reported the top three most successful methods for recruiting nurses. These were local advertising, career days, and campus visits, in that order.[14] Another survey questioned 318 nurses in 4 hospitals. The results showed four programs used for recruiting. These were: 1) providing special pay for difficult shifts, 2) paying bonuses to staff who recruit other nurses, 3) paying bonuses for new recruits, and 4) emphasis on local newspaper advertising.[15]

Interviews with local nurse recruiters indicated that many methods of external recruitment were used. The figures given in table 12 are estimates of annual recruitment activity by six nurse recruiters. Table 12 shows the most frequent modes of recruitment described by recruiters. These were newspaper advertisements, career days, job fairs, and open houses. Less

Table 12. Annual Frequency of Recruitment Activities at Area Hospitals.

	WHC	GWU	DC Gen	VAMC	Fairfax	Bethesda
Newspaper Ads	100	50	20	0	15	3
Career Days	40	5	6	2	8	0
Campus Visits	12	8	2	0	4	0
Career Directory	2	1	0	0	0	0
Job Fairs	10	5	5	2	12	0
Open House	8	4	4	1	4	0

Source: Survey of Local Nurse Recruiters

frequently used were campus visits and advertisements in career directories. None reported using bonuses, and none used bonuses for staff nurses who recruited other nurses.

Based on this survey and the reports in the literature, it was concluded that favorable enhancements to the WRAMC recruiting program could be made. These enhancements would include increased use of newspaper advertisement, job fairs, and open houses. These recommendations were also supported by the results of recruitment activity shown in table 6. The total number of recruits hired came from job fairs and newspaper advertisements. Less successful were the recruitment trips to campuses for career days. While the latter activities may serve to enhance the image of WRAMC, they are not sources for target groups.

Summary

This analysis has revealed several important factors that can be used to enhance the overall WRAMC recruitment program and reduce the numbers of nurse vacancies. The analysis of vacancies showed that the areas of critical need on the fourth and fifth floors that have been chronically difficult to fill. These units are 45, 46, 49, 51, and 58.

The present recruitment plan is in it's infancy and will require further nurturing to develop. Key personnel in the DON, executive administration, and the CPO must continue to enhance communication and coordinate their activities to assure the recruitment plan is operational.

Marketing analysis and analysis of vacancies should be done routinely to assure the success of the recruitment program. While current salaries are not in the top quartile in the region, significant progress has been made in achieving new pay rates. Approving agencies for salary increases must be kept aware of our situation so that we can remain in a competitive posture. Besides evaluating levels of experience and equivalent GS rates, future pay comparisons should include analysis of salaries for critical specialty areas and hard to fill units.

Positive institutional attributes should also be emphasized in the recruitment plan and programs. The shift differential, name and reputation of the hospital, use of high technology, and support of a worthwhile cause are just a few of the features that can be used to attract recruits.

Once vacancies begin to fill, and reliable inventories and data can be accumulated, the R&P branch can direct efforts to forecasting requirements. Turnover reports are another excellent tool used by managers to predict the workforce, and trouble shoot problem areas.

TURNOVER

Turnover reports have many uses for personnel management and can be helpful in developing systematic procedures for filling vacancies once trends are established. These reports can also be used as measures of satisfaction and indicators for management concern. Comparisons can be made with other hospitals or within the same hospital over a period of time. It is important that turnover is evaluated regularly to observe for changes. The cost of turnover is high because it requires recruitment of a new nurse and subsequent orientation and training. In the interim some hospitals, such as WRAMC, must rely on contract nurses at a significantly higher cost. Not all turnover is bad. Indeed, some turnover is desirable. But because of the considerable cost of turnover, it is preferable to have lower rates.[16] The purpose of studying turnover was to determine the reasons for turnover, the trends in turnover rates, and whether or not management could intervene to reduce the number of nurses leaving the organization.

Analysis of Turnover

Turnover rates for the fourth and fifth floor were calculated for the period 1 October 1986 to 31 September 1987. The rates for individual units are shown in **table 13**. The formula used was the number of separations divided by the number of persons employed at the end of the month. Annual turnover rates for these areas had not been recorded by the CPO in the past. Therefore, data cards, nursing time schedules, and TDA's from the DON were used to reconstruct the rates. The rates for prior years could not be established. There were no records showing the assigned workforce by unit at the end of each month. Therefore, in the table for the years prior to 1986, the number of people leaving during the year, and not the rate, is shown.

As demonstrated in **table 13**, Seven of the 21 units had turnover rates of over 50%. These included wards 45, 47, 48, 49, 51, 58, and Ambulatory Surgery. Some of these units have less than three employees, which skews the rates. For example, Ward 47 with one person leaving had a rate of 77 %. Four units had three or more employees leaving, and rates higher than 50%. These were wards 45, 46, 49, and 51. All are intensive care units, except for 51 which is a pediatrics unit. **Table 14** shows the turnover rates and numbers leaving by floor. The fifth floor had the higher absolute rate (70%) in comparison to the fourth floor (45%). On the fourth floor, the number of people leaving

per year has remained relatively unchanged at 29 RNs per year. On the fifth floor, the number of people leaving per year has increased from 11 to 17 since 1984.

Table 13 Civilian Nurse Turnover by Unit and by Floor.

UNIT	RATE	TOTAL NUMBER LEFT		
	1 Oct 86-30 Sep 87	1 Oct 86-30 Sep 87	1 Oct 85-30 Sep 86	1 Oct 84-30 Sep 85
40	17.8%	1	1	2
41	33.0%	1	4	2
42	9.2%	4	2	2
43	0.0%	0	0	2
44	33.3%	1	1	1
45	100.0%	9	6	4
46	86.0%	4	8	7
47	52.2%	2	0	0
48	77.0%	1	0	1
48d	36.3%	1	1	0
49	74.0%	3	4	5
Amb Surg	57.0%	1	0	-
Rec Rm	33.3%	1	2	0
51[a]	98.0%	6	5	7
52[a]	20.0%	1	1	1
53	0.0%	0	0	0
54	22.2%	1	0	0
55	62.0%	3	1	1
56	39.0%	1	1	0
57	37.5%	2	2	0
58	102.0%	3	1	3

[a] new mission established and personnel transferred from other wards.

Source: Personnel Data Cards and Nursing Time Schedules.

Table 14. Separations for Fourth and Fifth Floors.

	RATE	TOTAL NUMBER LEFT		
	Oct 86-Sep 87	Oct 86-Sep 87	Oct 85-Sep 86	Oct 84-Sep 85
Fourth Floor	45%	29	29	26
Fifth Floor	70%	17	11	12
Total	48%	46	40	48

From this analysis it can be concluded that only small numbers of civilian nurses are employed on the fourth and fifth floor units. Because of the small numbers, the turnover rates can be misleading. Managers must monitor the actual number of nurses leaving along with the turnover rates. This analysis showed that certain units have experienced a higher number leaving as well as higher turnover rates for the last 36 months. These units included wards 45, 46, 49, and 51.

Turnover rates can be compared with other hospitals in the industry. In 1977 Price noted four studies of hospital nurses. These reported turnover rates ranging from 37 to 67 per cent.[17] More recent studies have shown decreasing rates. One study reported turnover at 30 per cent.[18] In the NAHCR study of 1987, the overall separation rate for nurses nationally was found to be 20%. The range of rates was between 1-59%.[19] Comparison of rates with other hospitals is difficult because of the small numbers employed on units at WRAMC. However, the annual turnover rate of 48% for the

fourth and fifth floor shown in table 14 indicates there is a problem. Further analysis of turnover included looking at the reasons why employees left. The analysis also looked at whether the separations were unavoidable or could have been prevented by changes in programs and policies.

Reasons for Turnover

By identifying reasons for turnover, management can direct its efforts to retain good employees. For this paper, the data were separated into two categories. The first category was conditions over which management had control. The second category was conditions over which management had no control. The data collected in table 15 were from the employee separation questionnaire distributed by CPO. All personnel leaving employment are asked to fill out this form. Information from January to December 1987 was compiled. The reasons for separation are categorized as "avoidable" and "unavoidable." Responses of those working in the areas of highest turnover (45,46,49,51) were separated from other units on the Fourth and Fifth Floor Nursing Services.

Table 15. Reasons Given for Separations, Fourth and Fifth Floor Nursing Services.

AVOIDABLE REASONS

Reason Given	Frequency of Response
Transfer to another federal facility	9
Better pay	8
Parking	1
Staff Shortages	2
Long hours	2
Scheduling	2
Better educational benefits	2
Better benefits	1
Return to school	1
Lack of positive recognition	1
Lack of leadership	1
Lack of child care	1
Change in nursing experience	1

UNAVOIDABLE REASONS

Retirement	1
Moving out of state	3
Spend more time with family	1
Less commute time	1
No reason given	3

Table 16. Reasons Given for Separations, Hard to Fill Units

AVOIDABLE REASONS

Reason Given	Frequency of Response
Transfer to another federal facility	2
Better pay	2
Parking	0
Staff Shortages	1
Long hours	2
Scheduling	2
Better educational benefits	0
Better benefits	1
Return to school	1
Lack of positive recognition	1
Lack of leadership	1
Lack of child care	0
Change in nursing experience	0

UNAVOIDABLE REASONS

Retirement	1
Moving out of state	1
Spend more time with family	0
Less commute time	1
No reason given	1

The responses listed in tables 15 and 16 came from 23 respondents. This amounts to 57% of those who left in FY 1987. The sample data showed that nurses cited more than one factor in their decision to resign.

As table 15 shows, there were 11 avoidable reasons and four unavoidable reasons from the entire fourth and fifth floor nursing services. On the units with the highest turnover rates, there were nine reasons listed as avoidable turnover and three reasons as unavoidable.

The two main reasons for avoidable turnover in both groups were transfers to other federal facilities and better pay. It was not clear why the nurses transferred to other federal facilities. Further analysis of reasons for turnover should determine specific reasons for termination.

The responses to reasons for termination point out several important factors. Turnover at WRAMC has resulted for multiple reasons. Other studies of turnover have also indicated that the reasons for termination are multiple and diverse.[20-23] Nursing and hospital administration may not be able to overcome the problem of reducing turnover with one or two remedial actions that appeal to all nurses. The reasons must be investigated thoroughly on a case by case basis.

From this analysis, it was concluded that a more thorough evaluation and documentation of reasons why nurses leave was needed. It would also be desirable to have a sample with more personnel. The literature recommends that exit interviews be

done by managers in person. The results should be recorded for every employee and the interviews conducted as near to the time of the decision to leave as possible.[24,25]

Another aspect of turnover analysis is determining the length of tenure of terminated employees. The duration of employment can be used as a measure of the effectiveness of the recruitment, orientation, and retention programs.

Length of Tenure Upon Separation

Data regarding the length of tenure upon separation was collected for the periods Jan-Dec 1987 and Jan-Dec 1986 (table 17). For the 1987 period there were a total of 40 nurse separations. For the period of review in 1986 there were 38 nurse separations. The data suggested there was a difference in tenure upon termination for each year. The chi-square test statistic was used to test the hypothesis of independence. The table of chi-square distribution shows that for this example there are 6 degrees of freedom. The hypothesis of independence may be rejected with a chi-square test statistic above 16.812 at the .01 level of significance. In this instance, the number of separations for each year gave a chi-square statistic of 21.32. This indicated that the year of termination was a predictor for the length of tenure. For 1987, length of tenure upon

Table 17. Length of Tenure Upon Separation.

	JAN-DEC 1987			JAN-DEC 1986		
	Actual Number	Total %	Cumulative %	Actual Number	Total %	Cumulative %
0-6months	4	10%	10%	11	29%	29%
6 months - 1 year	2	5%	15%	11	29%	58%
1 year - 2 years	10	25%	40%	5	13%	71%
2 years - 3 years	10	25%	65%	3	8%	79%
3 years - 4 years	5	12%	77%	0	0%	79%
4 years - 5 years	3	8%	85%	1	3%	82%
> 5 years	6	15%	100%	7	18%	100%
	n=40			n=38		

Source: employee data cards in the DON

termination showed that the majority of turnover on both floors (over 85%) occurred after one year of employment.

In contrast to these findings, other studies of nursing turnover studies have reported that most turnover occurs in the first six months to one year of employment.[26] Tenure upon termination for these floors occurred primarily after one year of employment. Therefore, management should be made aware of issues that arise after one year of employment in order to understand the concerns the employees. They can become aware of issues

through surveying, written correspondence, group meetings, or individual meetings with the nurses. Management should then attempt to resolve the concerns identified. The process of resolution may involve change, intervention, or education. Confronting and identifying the issues is an essential first step if the problem of turnover is to be understood and managed.

Summary

It can be concluded from this study of turnover that management intervention is crucial in order to retain personnel. The units experiencing the highest rates of annual turnover include wards 45, 46, 49, and 51. These units, along with ward 58, also have the highest annual vacancy rates. Attempts to reduce overall turnover and improve stability should concentrate on these units.

The low incidence of turnover reported in the first year of employment suggests that employee expectations are generally met in the orientation phase. This conclusion is supported by the reasons for turnover collected by the CPO. Because most of the turnover is occurring after one year of employment, nurses who are at this length of tenure are most vulnerable. Managers need to seek out the nurses who have been employed for more than a year and identify those issues crucial to employment and their decisions to stay.

The reasons given for turnover in the analysis presented in this section may be suspect in their truthfulness. However, the analysis did indicate the that majority of persons leave because of factors under management control. All of these findings point to the need for management involvement and understanding of the reasons for turnover. Correction of dissatisfying working conditions, perceptions, or job components are ultimately needed in order to reduce turnover and improve retention.

RETENTION

Determining what measures will result in improved retention or decreased turnover of nurses is a difficult task for managers. One method that has been used is to identify factors which cause dissatisfaction and then intervene to improve the satisfaction of the nurses. The underlying assumption in the relationship between job satisfaction and nurse retention and turnover is that satisfied nurses tend to stay and dissatisfied nurses tend to leave. Research studies and literature describing these relationships are diverse, conflicting, and complex. One survey tool which has been used in many studies of nurse satisfaction is the instrument developed by Stamps and Piedmonte.[27] This survey instrument was chosen for use in this study because of the applicability in determining those issues important to certain groups of nurses, and the high degree of reliability and validity of the instrument.

Survey of Nurse Work Satisfaction

The theoretic framework of the survey instrument views work satisfaction as a multifaceted concept as discussed in the writings of Vroom, Heinrich and Smith, and others.[28] These concepts include several components of work satisfaction. The

six satisfaction components used by Stamps and Piedmonte were: 1) the component pay (Pay), 2) the component professional status (Professional Status), 3) the component autonomy (Autonomy), 4) the component interaction (Interaction), 5) the component task requirements (Task Requirements), and 6) the component organizational policies (Organizational Policies).

The survey instrument was designed to measure the level of satisfaction with each component as well as the importance of the component to the individual nurse. Measuring the level of importance of components is a significant feature of the instrument that is taken from the need fulfillment theories.[29] The more important the component is to the nurse, the more "need" there is for satisfaction with that component. Those components rated as having a high level of importance and a high level of satisfaction are positively related to overall satisfaction and therefore retention.

Dissatisfaction with important components indicates there is a need for management to address the issues surrounding dissatisfaction in order to avoid losing the nurse. If both the level of importance and the level of satisfaction are low, the authors suggest there may be several management considerations. First, the level of satisfaction could be low because they neither expect nor desire high levels of satisfaction with that component. Second, it may be that dissatisfaction with the component is chronic and that nurses feel satisfaction is

unattainable, thus they devalue the component and give it a low level of importance.

The survey instrument was divided into three parts (**Appendix D**). The first part determined the level of importance of the components by paired comparisons and the second part measured the level of satisfaction with. The definitions of the components were explicitly stated in the instructions so that it would be less likely that the constructs would be misinterpreted.

The satisfaction portion of the instrument had been tested by the authors and were stated to be highly reliable and valid. Tests of reliability included Kendall's Tau (.9213) and Cronbach's alpha (.82003). The third part of the survey requested demographic information. The wording for this portion was taken from a study done by Patricia Prescott on "Vacancy, Retention and Turnover". Permission to use questions from both of these studies was obtained (**Appendix E**).

The survey was distributed to 60 civilian nurses on the Fourth and Fifth Floor Nursing Services. Forty-five nurses returned the survey for a total response rate of 75%. Only nurses who worked full time and had been employed at WRAMC for more than six months were asked to participate. In order to characterize and describe the respondents, the questions regarding age, tenure, education, and expected employment will be reviewed first.

Characteristics of Respondents

In the third section of the survey, demographic information was collected. The responses to the questions were analyzed in terms of the overall mean response and the mean response for areas which were previously determined to be hard to fill.

The average age for nurses from all units was 43 years. The years of experience as a nurse averaged 16 years. Both the age and experience of the nurses indicated that the majority of the respondents were mature and experienced. The average length of tenure at WRAMC was 7 years. The range of tenure at WRAMC was 6 months to 36 years.

The age, tenure, and experience of nurses from the hard to fill units were extracted from the surveys. The mean age of these nurses was also 43 years and the years of experience also averaged 16 years. The average length of tenure at WRAMC in the hard to fill areas was 8 years.

For both groups, the average length of tenure at WRAMC along with the number of years of experience as a nurse point out two significant factors. First, many of these nurses have worked in other settings as a nurse, so they have more experience from which to make comparisons. Second, there are very few young nurses being brought into the civilian nurse workforce. This will become more of a concern as older nurses retire, or reach an age at which they are not able to perform some of the physical requirements such as lifting and turning patients. The information regarding age and tenure is capsulized in table 18.

Table 18. Age and Tenure of Respondents.

	ALL NURSES-- FOURTH AND FLOORS n=40	NURSES ON HARD TO FILL UNITS n=10 (45, 46, 49, 51, 58)
Mean Age	43 years	43 years
Experience as RN	16 years	16 years
Tenure at WRAMC	7 years	8 years

The level of education at entry was also determined. For those surveyed 40% had started their career with a diploma, 30% with an Associates Degree, and 30% with a Bachelor of Science in Nursing. A few of the individuals indicated on the form that they had pursued higher degrees. Given the age of the respondents, one would anticipate the entry level to be through Diploma and Associate Degree schools. While this information may not be significant for retention purposes, it may be useful for recruitment strategies. If those nurses who had remained employed come from Diploma and Associate Degree programs, this indicates they may continue to be a good source for future recruitment.

Finally, nurses were asked whether they expected to be employed at WRAMC one year from now. The responses to this question are highlighted in table 19.

Table 19. Expectations of Employment at WRAMC After One Year

ALL NURSES FOURTH AND FIFTH FLOOR n=40	NURSES ON HARD TO FILL UNITS n=10
yes.....29	yes.....3
no.....7	no.....5
don't know....4	don't know...2

The responses of the nurses indicate that the majority of all nurses on both floors are planning to stay (29 of 40). However in the areas which are hard to fill, 5 of the 10 nurses surveyed plan to leave and an additional 2 nurses are undecided. Measures that can be taken to influence these nurses' decisions to stay should certainly be considered.

Paired Comparisons

The importance of each component was determined by a series of paired comparisons. Nurses were asked to choose the most important of two components. Those components selected more frequently were considered to be more important to job satisfaction and morale. Mathematical computations were made to determine the rank order or sequence of importance. First, the scores were arranged in a matrix table and the frequency of

responses were summed for each component. Second, the proportion of respondents selecting a particular component was calculated by multiplying the frequency of response by 1/36. The denominator of this fraction was determined by the total number of persons responding to all the paired comparisons. The calculations are shown in **Appendix F**. The calculations were made for each floor as well as the hard to fill areas and the total responses. The responses of the hard to fill units were also added into the respective floors. For example, the fifth floor responses include wards 51 and 58.

The third step in this analysis involved computing a scale value to be used as a measure for comparing responses in each area. This scale value, called the component weighting coefficient, is the relative value of importance of the component. The values were calculated by 1) obtaining a Z value for each of the proportions, 2) obtaining a mean value of the Z scores for each component, and 3) adding the number 3.1 to each of the mean values to arrive at the component weighting coefficient. The number 3.1 was arbitrarily chosen in order to make all of the scores positive.

The Z matrix showing the tabulation of the component weighting coefficient for both floors is displayed in **table 20**. The table is read by comparing the Z value for components intersecting the columns and rows. Positive values indicate the component in the column "Most Favored" is more important than the component in the row "Least Favored". Negative numbers indicate

the inverse relationship is true. For example, the intersect of "Organizational Policy" in the "Most Favored" column with "Pay" in the "Least Favored" row is -1.385. This negative value indicates that Pay is more important than Organizational Policy.

The component weighting coefficient shown in the bottom row is the scale value for that component. In this example, the lowest ranking component is Organizational Policy (2.297) and the highest is Pay (3.563). The ranking in order of highest to lowest for all nursing units was Pay, Professional Status, Autonomy, Interaction, Task Requirements, and Organizational Policies. Based on this finding, one would hope to find that the levels of satisfaction were highest in the components of Pay, Professional Status, and Autonomy.

Table 20.

Z MATRIX SHOWING COMPONENT WEIGHTING COEFFICIENT

	Most Favored					N=36
Least Favored	Organizational Policies	Task Requirements	Interaction	Autonomy	Professional Status	Pay
Org. Pol.	---	0.978	0.678	0.678	1.221	1.385
Task Req.	-0.966	---	0.070	0.765	0.510	0.678
Interact.	-0.674	-0.068	---	0.212	0.212	0.430
Autonomy	-0.674	-0.765	-0.210	---	-0.068	0.070
Prof.Stat	-1.122	-0.570	-0.133	0.070	---	0.212
Pay	-1.385	-0.674	-0.432	-0.068	-0.210	---
Sum	-4.821	-1.107	-0.027	1.657	1.665	2.775
Mean	-0.803	-0.185	-0.005	0.276	0.278	0.463
Component Wt. Coeff	2.297	2.916	3.095	3.376	3.378	3.563

Additional Z matrices showing component weighting coefficients were computed for the fourth floor, fifth floor, and hard to fill nursing units. The hard to fill units were previously defined as wards 45, 46, 49, 51, and 58 in the sections discussing vacancies and turnover. These matrices are displayed in **Appendix G**. The relative rankings of levels of importance were compared to see if there were differences between the areas. Component rankings are listed in **table 21**.

Table 21. Rank Order of Components.

FOURTH FLOOR	FIFTH FLOOR	HARD TO FILL AREAS (45, 46, 49, 51, 58)	ALL AREAS
Pay	Pay	Autonomy	Pay
Professional Status	Professional Status	Professional Status	Professional Status
Autonomy	Interaction	Pay	Autonomy
Interaction	Task Requirements	Interaction	Interaction
Task Requirements	Autonomy	Task Requirements	Task Requirements
Organizational Policies	Organizational Policies	Organizational Policies	Organizational Policies

The rankings listed in **table 21** are shown from highest to lowest levels of importance. A comparison of the relative rankings showed a difference between groups. For example, Pay

was ranked the most important component by the fourth and fifth floors overall, but in the hard to fill areas autonomy was noticeably more important.

The data does not indicate why these differences occurred, however, it can be conjectured that the role of nurses in these critical care areas may be a factor. Possibly, nurses working in the hard to fill areas do so because they enjoy the independence and autonomy required in most of these units and value this component higher. Or, it may be that the nurses who valued Pay more highly have already departed these areas of high vacancy and turnover. The nurses who have stayed in the hard to fill areas may experience intrinsic satisfaction with their roles that outweigh any dissatisfaction with Pay in their decision to remain working.

One may consider the high ranking of Autonomy as a potential recruitment and marketing techniques. If the component Autonomy ranks high in satisfaction, the role of nursing autonomy in these areas may be emphasized in recruitment strategies.

Another variation between these groups was the high ranking of Interaction by nurses on the fifth floor. Seven of the Thirteen nurses completing this section of the survey were psychiatric nurses. Frequent group and individual care planning conferences are an integral role of nurses in these areas which may explain why this component is ranked high and autonomy was ranked so much lower. It would be expected that satisfaction with interaction would be high on the fifth floor since turnover

has been relatively low in the past. All groups were consistent in ranking Organizational Policies as the least important component and Task Requirements on the lower ends of the scale.

Seven other studies of RNs using this tool have also found Task Requirements and Organizational Policy ranked lowest among the components (**Appendix H**). These studies indicate that the ranking of components varies from hospital to hospital and even within groups of nurses. It is important to consider the level of importance and satisfaction with these components for each individual group since perspectives may vary. For the purposes of this study the hard to fill units and the respective floors will be considered in evaluating the responses to satisfaction questions. The responses will be considered in light of the level of importance of the component and the significance of the component to the work areas.

Attitude Survey

The attitude survey portion of the questionnaire was the tool used to measure job satisfaction of the nurses. The section was composed of 44 questions used to describe the six components. Each component had at least six corresponding questions. The component "Interaction" was divided into the two subcomponents of "nurse- nurse" and "nurse-physician" interaction. The answers for all of these questions were selected on a Likert type of scale from one to seven. The actual scores for this area are

found in **Appendix H**. The responses were evaluated for the areas overall, each floor, and the hard to fill areas.

The component scores in **table 22** reflect the level of satisfaction for each of the six components. The total score was 7,072 out of a possible total of 12,936. The overall mean of the scores was 4.0 which was exactly the mean of the scale of one to seven. Generally, surveys of nurses have found nurses to have a higher level of dissatisfaction than other groups.[31] There were no other direct comparisons to these scores from other studies. Since the mean score was 4.0, this indicates that the overall satisfaction level was in the mid ranges.

TABLE 22. Summary of Attitude Scores

TOTAL SCORE		7072
TOTAL SCALE SCORE		161
TOTAL SCALE MEAN		4
»»		
COMPONENT MEAN SCORE		
Professional Status		5.2
Interaction		4.4
a) Nurse-Nurse	4.6	
b) Nurse-Physician	4.3	
Autonomy		4.4
Task Requirements		3.2
Organizational Policy		2.6
Pay		2.1

The raw mean scores for each component are shown under the heading "Component Mean Score". These scores reflect the mean scores of forty-two nurses from all the areas surveyed and are ranked in descending order.

Table 22 shows the raw satisfaction scores which do not take into consideration the importance of the component. The highest satisfaction scores were for Professional Status and Interaction, and the lowest scores were for Pay and Organizational Policy. The scores for both nurse-nurse and nurse-physician interaction are slightly above the mean.

The table indicates that the levels of satisfaction with the components of importance were generally higher than the mean scores. The exception to this was the satisfaction scores for Pay which was ranked lowest in level of satisfaction. It should be noted that at the time of the study, a pay raise for these nurses had been announced. The nurses had been waiting for over three months for the raise to appear in their pay. It was determined from conversations with the nurses and from written comments that the survey reflected attitudes toward the pay they were currently receiving, rather than how they felt about their expected salaries. Therefore, although the satisfaction scores for the Pay component were low this was not a good indication of the level of satisfaction with the current pay raise.

The mean component scores for other areas were also computed and are shown in table 23. The responses from the hard to fill units are also included in the summary of the fourth and fifth floors. Again, these are raw scores which do not take into

consideration the importance of the components to the individual nurses in these groups. The responses from each group indicate similar ranking of satisfaction with the six components. A general comparison of the scores indicated that the mean scores for the fourth floor were slightly lower than both those of the fifth floor and the hard to fill areas.

Table 23 Component Mean Score by Area

	FOURTH FLOOR n=29	FIFTH FLOOR n=13	HARD TO FILL UNITS n=11	ALL AREAS n=42
PROFESSIONAL STATUS	5.1	5.4	5.3	5.2
INTERACTION	4.3	4.8	4.6	4.4
A) NURSE-NURSE	4.4	5.0	4.6	4.6
B) NURSE-PHYSIC.	4.2	4.5	4.6	4.3
AUTONOMY	4.2	4.7	4.4	4.4
TASK REQUIREMENTS	3.2	3.4	3.1	3.2
ORGANIZATIONAL POLICIES	2.6	2.5	2.7	2.6
PAY	2	2.4	2.5	2.1

General trends were noted in the ranking of satisfaction scores as well. Higher scores were obtained for Professional Status, Interaction, and Autonomy. Lower satisfaction scores were noted for the components of Task Requirements, Organizational Policies, and Pay. Once again, the level of satisfaction with the Pay component may be related to the

previous pay rates rather than the current raise. The fact that the highest components of satisfaction were also the highest components of importance is a positive indication of overall satisfaction of the nurses. The fact that the components of lowest satisfaction were also those of lowest importance remains difficult to interpret. The low scores do not readily indicate that these components are not important or that the nurses simply do not expect satisfaction with these elements. Rather than disinterest in the question, there appears to be strong sentiment about these components.

The weighted, or adjusted scores, are shown in **table 24.** The adjusted scores were computed by multiplying the mean component score by the component weighting coefficient (CWC). Thus, if the CWC and the level of satisfaction were high the adjusted score would be high. If the CWC were low and the level of satisfaction was high, the adjusted score would be somewhere in the midranges of the scores.

Table 24. ADJUSTED SCORES—All Areas

COMPONENT		QUARTILE
Professional Status	17.6	25 - 50%
Autonomy	14.9	25 - 50%
Interaction	13.6	25 - 50%
Task Requirements	9.3	0 - 25%
Pay	7.5	0 - 25%
Organizational Policy	6.0	0 - 25%
Index of Work Satisfaction:	11	25- 50%

Listed at the bottom of the table is the Index of Work Satisfaction. The numeric result of 11 can be viewed as the overall satisfaction score. While this numeric score may be difficult to interpret, the range of possible scores indicates that the level of satisfaction falls in the 25-50% range. More simply stated, there is a low to moderate level of work satisfaction amongst all the nurses surveyed.

There was a slight difference noted in the ranking of components in **table 24** as compared to the raw scores shown in **table 22**. When the importance of components was considered, Professional Status was still the most satisfactory component, but Autonomy rather than Interaction became the second highest satisfier. The scores indicated that satisfaction with Organizational Policy, Pay, and Task Requirements remained quite low. However, Organizational Policy, rather than Pay was the biggest dissatisfier. The use of the adjusted scores in other studies has not been standardized, so direct comparisons could not be performed.

A relative satisfaction index was done by ranking the scores in quartiles. The level of satisfaction with the first three components was moderate in the 25-50% range. These components (Professional Status, Interaction, and Autonomy) were considered the more favorable elements of job satisfaction (even though the actual satisfaction scores were low). The lower three components fall below the 25% range, and could be viewed as dissatisfiers.

Table 25 illustrates the adjusted scores for the fourth

floor, fifth floor, and for the hard to fill areas. On the fourth floor it was previously noted that the rank order of the three most important components was Pay, Professional Status, Autonomy. The adjusted scores reflect that the level of satisfaction with Pay was very low and this component fell to the second lowest position. Professional Status and Autonomy remained high in satisfaction. The adjusted scores show a high level of importance and a high level of satisfaction. Task Requirements and Interaction, which had received moderate ratings of importance, were in the middle levels of the adjusted scores.

Table 25. Adjusted Scores by Area.

	Fourth Floor	Fifth Floor	Hard to Fill Areas
Professional Status	18.2	17	18
Autonomy	14.2	14	15
Interaction	13.2	15	14
Task Requirements	9.1	10	9.4
Pay	7.5	8.7	7.7
Organizational Policies	6.1	5.6	6.1

Of note was the component Organizational Policies. The adjusted score shows both a low level of importance and a low level of satisfaction. As discussed previously, the authors contend this can be viewed in different ways. It may be that nurses are chronically dissatisfied with this component and

therefore devalue the importance. Or it may be that the nurses neither expect nor desire satisfaction with this component. However, the significant level of dissatisfaction with this component raises an issue. This is an area in need of investigation and potential management intervention.

On the fifth floor, the components of highest importance were previously stated to be Pay, Professional Status, and Interaction. The adjusted scores reflected the highest components as Professional Status, Interaction, and Autonomy. Except for Pay, the components of highest importance were also the components of highest satisfaction. The adjusted score for Pay was the second lowest component and Organizational Policies was the lowest. The adjusted scores of Task Requirements and Autonomy were in the middle ranges and consistent with the expectations of nurses on this floor. It was felt that with the exception of the components Pay and Organizational Policies, the scores reflected a degree of satisfaction on the part of fifth floor nurses.

The previous ranking of the most important components in the hard to fill areas was Autonomy, Professional Status, and Pay. The ranking of adjusted scores was similar to that of the 4th floor and the overall sample, and indicated that the Professional Status, Autonomy, and Interaction were rated the highest. Because of the relatively high ranking of the top three it appeared that satisfaction with these components was consistent with the expectations of nurses in these areas.

However, the components Pay and Organizational Policies were rated lowest of all the areas in terms of satisfaction.

The average level of satisfaction was determined for the six components. The Index of Work Satisfaction was 11, indicating a low to moderate range of satisfaction overall. The scores varied with the work location of respondents, but the same pattern emerged in the ranking satisfaction with the different components. It was noted that the average level of satisfaction was high for the components Professional Status, Autonomy, and Interaction and lower for Task Requirements, Organizational Policies, and Pay. The responses to the Paired Comparisons in the previous section indicated that the components Task Requirements and Organizational Policies were not considered as important as the others. The low level of satisfaction with these components, rather than neutral feelings, suggested that these were areas of concern that should be explored further.

The mean or average scores computed were the general response to the component. The scores do not give an indication of the level of satisfaction with the individual questions that make up each component. By viewing the frequency distribution of responses to questions more specific information can be obtained.

Frequency Distribution

In the previous section the average, or mean scores of the components of satisfaction were viewed. These averages gave a general indication of overall satisfaction with the components. By looking at the frequency distribution of responses, one can identify which questions had a higher percentage of nurses responding favorably or unfavorably.

For the purposes of this study, frequency distributions were constructed for each component. Graphs were made from the distributions that showed which questions had the highest levels of dissatisfaction. In this case, dissatisfaction was associated with scores ranging from 1 to 3, out of the possible 1 to 7. Again, the purpose of identifying items of dissatisfaction was to recommend ways to improve satisfaction that may result in retention. With this in mind, it was determined that if any question had 60% or more of the nurses responding as dissatisfied the particular question should be reviewed for strategies to improve retention.

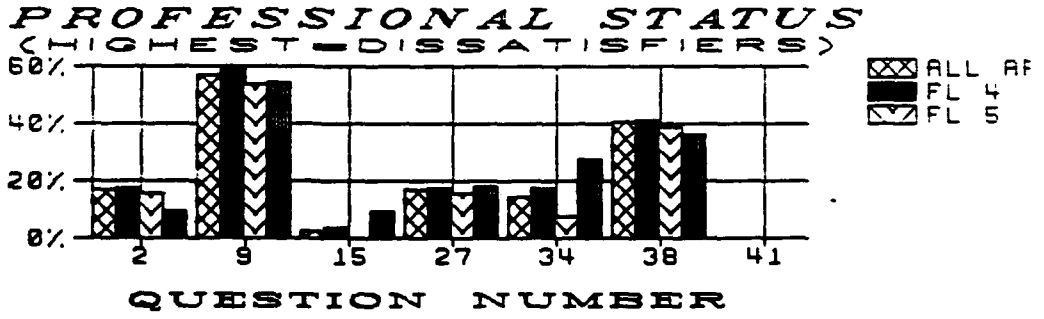
It was anticipated that components that had a high mean score for satisfaction would also have the fewest questions with a high number of dissatisfied responses. Likewise, those components that had lower mean scores would more likely have several questions with low scores.

This comparison of responses also looks at the different areas of interest. In addition to the total responses for all nurses,

the frequency of responses for the fourth floor, the fifth floor, and the hard to fill areas are included. The purpose of presenting information by area was to identify whether certain questions were more of an issue in a particular area. Evaluation of the information was done with this in mind.

Figure 1 shows the component Professional Status broken down into it's subcomponent questions. The number on the horizontal axis correspond to the question numbers in the survey (Appendix E). The vertical axis shows the percentage of nurses who responded with scores in the 1 to 3 range. Because the mean score of this component was high, it was anticipated that fewer of the subcomponent questions would have dissatisfactory responses. As this graph suggests, none of the questions had more than 60% unfavorable responses.

FIGURE 1



The component Autonomy is illustrated in Figure 2. As determined by the mean score of this component, the overall level of satisfaction was high. The frequency of responses to individual questions was also high with the exception of question 17 in the hard to fill areas.

FIGURE 2

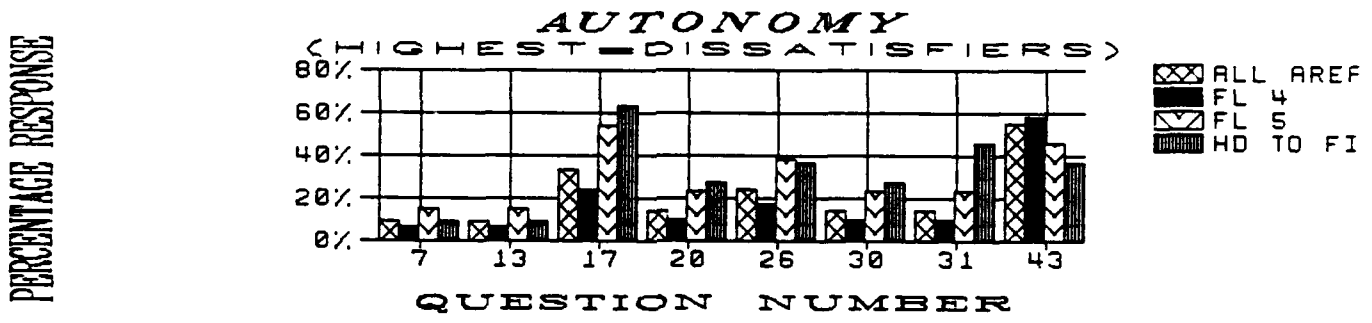
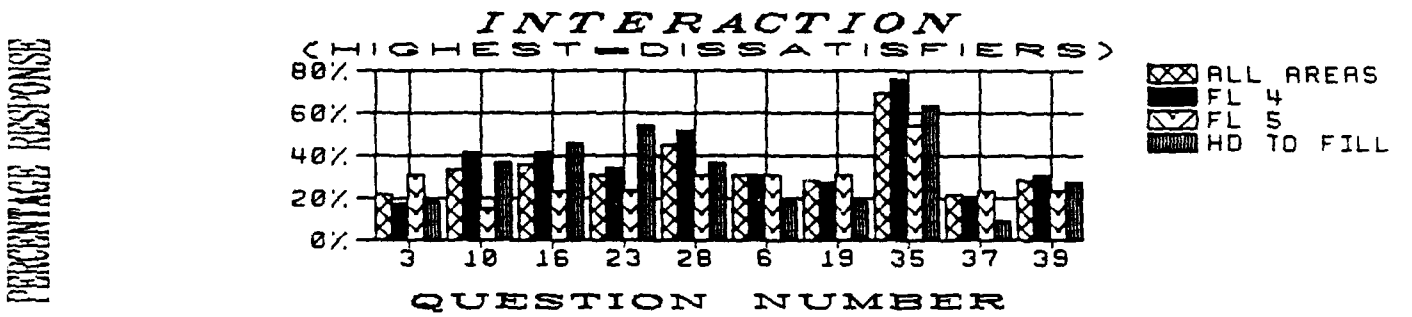


Figure 3 shows the frequency distribution for questions in the component Interaction. This component had an overall level of satisfaction above the mean. One question demonstrated low scores from over 60% of the nurses from the fourth floor and hard to fill areas. This was question 35 which stated "I wish the physician here would show more respect for the skill and knowledge of the nursing staff."

FIGURE 3



In Figure 4, the responses to the component Task Requirements are illustrated. The component mean score was low indicating that several of the questions were viewed a dissatisfiers. As shown in the graph, four of the six questions were scored as dissatisfiers by the majority of nurses from the areas of interest.

FIGURE 4

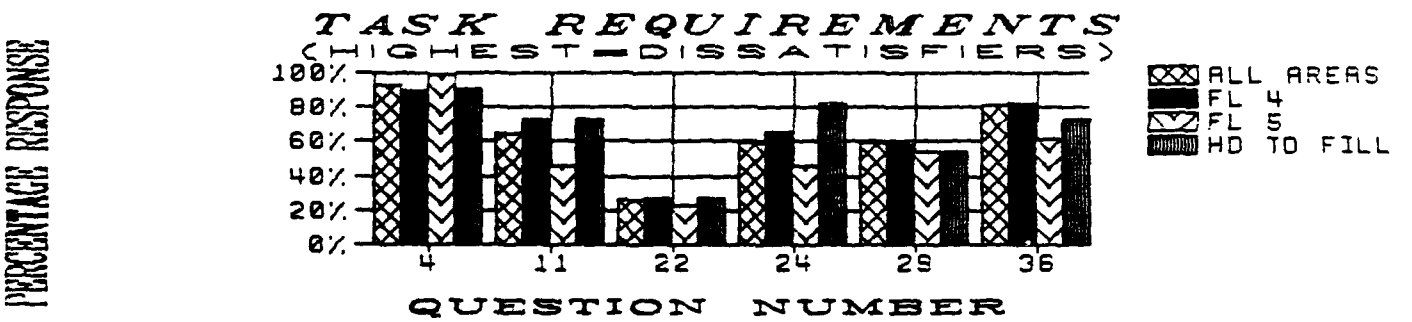


Figure 5 indicates the satisfaction with the various subcomponents of Pay. As is shown, the majority of respondents indicated scored low in response to all questions regarding pay.

FIGURE 5

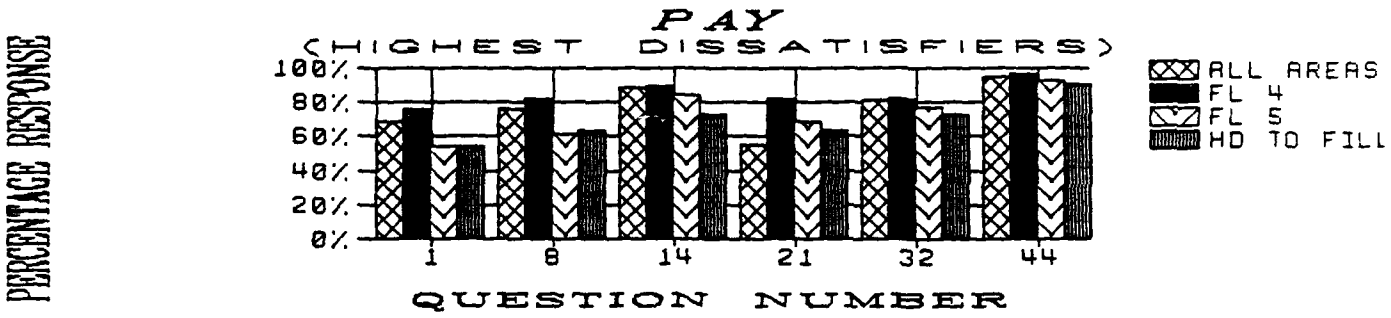
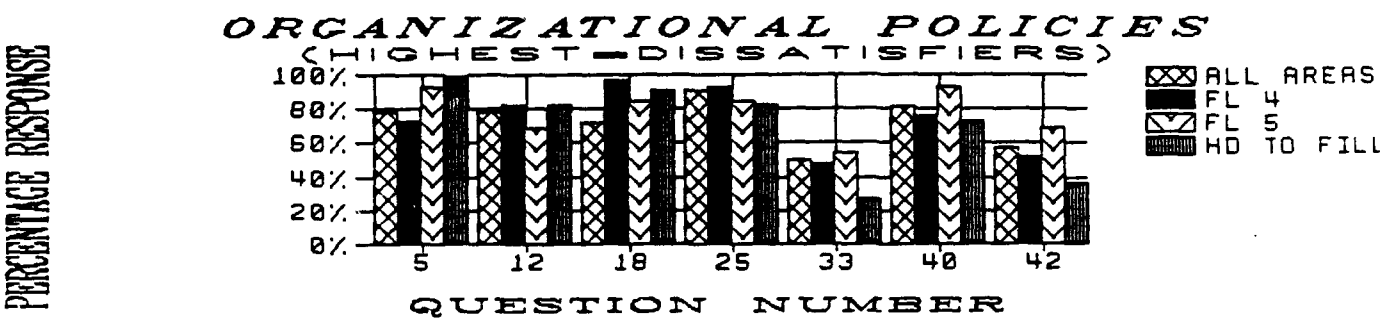


Figure 6 illustrates the component Organizational Policies. Because of the low mean score it was anticipated that many of the subcomponent questions would also have a high percentage of low scores. As anticipated, most of the responses to the subcomponent questions were associated with high levels of dissatisfaction with the exception of question 33. The questions of concern will be discussed individually as they apply to the areas of interest.

FIGURE 6



The frequency distribution of questions that had low scores were reviewed. The purpose of the review was to identify specific questions pertaining to issues that may be targeted to improve satisfaction and may result in improved retention. Questions in which more than 60% of the respondents selected low scores were considered to be items of concern. As was anticipated, those components which had the lowest satisfaction scores had the most items of concern. A discussion of the questions and considerations for managers is found below.

Discussion

Autonomy. Only one questions was an item of concern in this component. Question 17 stated "I have too much responsibility and not enough authority." More than 60% of the nurses in the hard to fill areas agreed with this statement. In the section on Paired Comparisons it was found that the component Autonomy was rated as the most important component by nurses in hard to fill areas. As related to the component of Autonomy, this question suggests the nurses in this area would like to have more voice in decisions regarding their responsibilities. The question does not discriminate as to whether "responsibilities" refers to the type of work, the amount of work, or how they carry out their tasks. Because of the vagueness in the scope of this question, more information regarding the elements of responsibility is needed. It can be concluded that because of the importance of the component, and the dissatisfaction expressed by a majority of nurses in the hard to fill areas, there is reason for concern by managers in these units.

Interaction. Question number 35 in this component stated "I wish the physician here would show more respect for the skill and knowledge of the nursing staff." This question dealt specifically with the attitude of professional respect. The question was distinguished from other types of nurse-physician interaction. For example, nurses responded favorably to the

floors. Again, [illegible]

questions regarding physician cooperation, nurse-physician teamwork, and physician appreciation in questions 6, 19, and 37. Nurses also responded that they did not feel that physicians looked down on nurses (question 39).

The response to question 35 suggested that while overall relations with physicians were amicable, improvements could be made to enhance the respect and professional acceptance of nurses on the fourth floor areas. Consideration should be given by managers in these areas to enhance this aspect of nurse-physician interaction through communication, meetings, and forums that can be used to educate physicians about nursing skills and knowledge.

Task Requirements. There were four questions of concern in this component. Question 4 stated, "There is too much clerical and paperwork required of nursing personnel at this hospital." Over 90% of the nurses in all the areas agreed with this statement. Conversations with many nurse and physician providers at this hospital have indicated that there is dissatisfaction with the amount of clerical and paperwork. The amount of paperwork and clerical work has risen with the increasing demand for documentation regarding legal issues, quality assurance, as well as interoffice communication. Attempts to achieve the optimal level of satisfaction with these and other requirements should not be discarded however. Consideration should be given to assuring the paperwork and clerical work is necessary, that it is being delegated to appropriate personnel, and that it is being

done with the optimal efficiency so that the time and effort required by nurses is minimized.

In assuring paperwork requirements are minimized, one must not assume that all reports, documents, and clerical activity is necessary because "we've always done it that way." The requirements should be reviewed to assure they are necessary, or evaluated to determine if they can be done less frequently. The second consideration involves assuring that paperwork and clerical requirements are delegated to the appropriate level. As discussed with nurses on many of the units, there are some tasks undertaken by nurses because of a shortage of clerical staff. The shortage is especially acute for GS 4 and 5 positions. Alternative staffing arrangements should be considered in order to obtain personnel for these duties. These may include a change in the rating of the positions, part-time and intermittent positions, and using programs for the handicapped, job training, and summer hire.

Managers on these areas should give consideration to ways to reduce the paperwork and clerical requirements of nurses in these areas. There are many paperwork requirements that nurses are obliged to be involved in even with increased clerical support. These include nursing assessments, notes, and quality assurance documents to name a few. Given that these requirements will remain unchanged, attention should be directed towards streamlining the procedures or making use of technology to help reduce nursing time and effort on paperwork.

Many hospitals have addressed this concern by installing word processing and computerized hospital information systems. These systems are also gradually being brought into the nursing environment at WRAMC. As these are introduced into the work setting, staff nurses would benefit if the systems are geared toward reducing the paperwork requirements. Other technologies that have been used in the hospital setting to reduce paperwork requirements include dictaphones, digital recording devices, and other transcription technology that bypasses the need for manual translation. While the costs of these technologies are great, consideration should be given for utilizing these on nursing units. Especially in areas of high vacancy and turnover, these technologies could prove to be valuable tools for improving retention. They could also be used to enhance the attractiveness of the work settings for recruitment purposes.

The other three questions of concern in the component Task Requirements were addressed only by the nurses from the fourth floor and hard to fill areas. Less than 60% of the nurses on the fifth floor selected low scores for these questions. These questions included:

> 11. I think I could do a better job if I didn't have so much to do all the time.
>
> 24. I have plenty of time and opportunity to discuss patient care problems with other nursing service personnel.

36. I could deliver much better patient care if I had more time with each patient.

Interpretation of these questions was difficult because of the way the questions were worded. However, it appeared that there was a degree of disparity between nurses' expectations of job performance and what they were able to perform. This issue may be particularly sensitive to nurses in these areas where autonomy is highly valued and where long hours have consistently been dedicated to achieve high standards of care. Assuming that the care the nurses feel they would like to be giving is above and beyond the standards of quality of care, it appears that the expectations of nurses are being frustrated. The amount of work they would like to do and what they are able to perform are not consistent leading to unmet expectations. If this is the case, then managers may need to evaluate how staff is being recognized and rewarded for their achievements, so that staff experiences improved satisfaction with the work they are performing.

It can be concluded that the amount of work being performed, and one's expectations are sensitive issues that should be addressed by managers on the fourth floor, and especially in the hard to fill areas. Nurses on these units must be recognized and rewarded so that they experience satisfaction with their performance and desire to remain employed.

Pay. The questions regarding pay included 1) satisfaction with present salary, 2) satisfaction with the rate of increase in

salary, 3) perception of how other nurses viewed pay, 4) the adequacy of pay considering what is expected of nurses, 5) comparison to pay rates at other hospitals, and 6) whether or not a pay increase was needed. As mentioned previously, the timing of the survey did not help to determine satisfaction with the new rates since the new pay scales had not been implemented. It was concluded from this information that satisfaction with the new pay rates was not determined and that the perceptions of satisfaction with these elements of pay should be validated by managers at the unit level.

Organizational Policies. There were six questions in this component that were of concern. Question 5 presented the statement "The nursing staff has sufficient control over scheduling their own work shifts on my unit." Over 60% of the nurses on both floors and over ninety per cent of the nurses on the hard to fill areas responded with low scores to this question. The concern with staffing and scheduling has been addressed by many hospital nursing representatives. For example, in testimony before the Commission of the Nursing Shortage Appointed by the secretary of the Department of Health and Human Services, a representative from the California Nursing Association offered seven suggestions to solve the nursing shortage problem. Two of those recommendations were to provide flexible scheduling and to allow to nurses to be involved in staffing systems.[32] Of course, it is not possible to allow

everyone to work during the day Monday through Friday. However, consideration should be given to improving the satisfaction with scheduling patterns in order to improve retention. Managers in these areas, and especially in the hard to fill units, should encourage involvement and explore alternative staffing arrangements.

Question 12 stated "There is a great gap between the administration of this hospital and the daily problems of nursing service." This was reported by the majority of nurses in all areas, but particularly on the fourth floor and the hard to fill units. This suggests that there is room for improvement in the communication process between hospital administrators and nursing service. In order to improve satisfaction with this component managers in these areas should be concerned with how the problems experienced on these units are being communicated to the administration and how they are being resolved.

Question 18 stated "There are not enough opportunities for advancement of nursing personnel at this hospital." This was a concern addressed by the majority of nurses in all areas and particularly on the fourth floor. The use of clinical ladders or "level of practice" programs have been demonstrated to be positively related to retention in other hospital settings.[33] Advancement of civilian nurses was a concern addressed in the study by the Civilian Personnel Office. The Army Nurse Corps Strategic Planning Conference held in 1987 also recognized this as an important issue in retention of RNs and is developing

recommendations for career ladders. Managers in all of these areas should be aware of this concern and assist in identifying those tasks or positions which could be used to develop career advancement within WRAMC.

Questions 25, 40, and 42 were similar in that all addressed the involvement of staff nurses in decision making. These questions were stated as follows:"

25. There is ample opportunity for civilian nursing staff to participate in the administrative decision-making process.
40. I have all the voice in planning policies and procedures for this hospital and my unit that I want.
42. The nursing administrators generally consult with the staff on daily problems and procedures.

The first two questions were seen as issues in all areas but only the majority of nurses on the fifth floor took issue with question 42. The question of participating in decisions has been addressed in this decade by situational leadership theories.[34] In the situational leadership model, techniques for supervising personnel with a high level of maturity and work experience is through participation or delegation. The responses to demographic questions from nurses in these areas indicated that most of these nurses have had over ten years of experience and an average age of 43 years. Therefore, using the situational model, supervision and motivation of nurses in these areas would probably be most effective through participatory leadership or

delegation of tasks that need to be performed. The general responses from the nurses in these areas suggest that they would be benefited from sharing in decision-making processes that affected their jobs and work environment.

Overall, for the component Organizational Policies, management concern should address three major subjects. The first is to assure staff nurse input into scheduling and staffing decisions. The second consideration is to develop levels of practice or clinical career progression for improving retention. The third consideration is to encourage nurses within the department and sections to participate in decision making that affects their working conditions. The analysis indicated that in relation to the component Autonomy, nurses in the hard to fill areas would like to have more voice in decisions regarding their responsibilities. The responses to the component Interaction indicated that in the fourth floor and hard to fill areas improvements could be made to enhance the respect and professional acceptance of the skills and knowledge of nurses.

From responses to the component Task Requirements it was determined that managers should be concerned about the amount of nursing time being spent on paperwork and clerical work. Measures should be taken to seek alternative personnel support, and the use of computers and transcription technology to reduce time and effort of the nursing staff. Other responses to this component indicated that satisfaction with the amount of care

being provided on the fourth floor areas should be improved. Suggestions to improve satisfaction with performance are to increase the recognition and rewards of nurses in this area.

Because the component of Pay did not accurately reflect the views of nurses regarding the new salary rates, the effectiveness of the new rates in improving retention should be validated by managers at the unit level.

For the component Organizational Policies, management should address 1) the assurance of staff nurse input into scheduling and staffing decisions, 2) the development of levels of practice or clinical career progression for staff nurses, and 3) the encouragement of staff nurse participation in decisions in the department and sections which affect their work. Consideration should be given by managers in these areas to improve satisfaction with these job components in order to help retain nurses in these areas.

Summary

The survey respondents representing nurses from the fourth and fifth floor units were mature and experienced nurses. Twenty-nine of the 40 answered favorably to the question, "Do you expect to be working at this hospital a year from now." Of concern however, is the fact that seven of the ten respondents from the hard to fill areas either weren't sure, or said they

did not anticipate employment a year from now.

Consideration of the level of satisfaction with various components of work satisfaction was evaluated in order to determine how satisfaction could be improved in these areas. Generally, the nurses surveyed considered Pay, Professional Status, Autonomy, and Interaction important components of work satisfaction. Organizational Policies and Task Requirements were ranked lower in importance. Satisfaction with these components was high for Professional Status, Autonomy, and Interaction. The components Task Requirements, Organizational Policies, and Pay were scored lower in satisfaction.

Because the recent pay raise for nurses had not gone into effect at the time the survey was distributed, the responses to this component did not accurately reflect satisfaction with the new pay rates.

Specific considerations for improving satisfaction in all areas are for managers to 1) evaluate the amount of clerical and paperwork nurses are performing, 2) determine the types of jobs or tasks that could be used to develop career progression, 3) incorporate nurses into the process of scheduling and staffing, and 4) consider allowing these nurses more participation in decisions which affect their jobs and work environment. Specific considerations for the fourth floor and hard to fill areas concerned were:

1) enhancing the professional recognition of nursing skills and knowledge,

2) evaluation of the responsibilities of the nurse, and areas where more authority is needed for nurses,
3) evaluation of the types of jobs and care that are constrained by time, and
4) evaluation of the process for recognizing and rewarding nurses.

Evaluation of these subcomponents of satisfaction should be done by managers at the unit and section level. Evaluations should be done to determine measures to improve satisfaction and to ultimately retain those nurses who are now working.

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CHAPTER III. CONCLUSIONS

CONCLUSION

The goal of this study was to describe recruitment and retention strategies that could be used to improve the vacancy and turnover problems on select units of the nursing services at Walter Reed Army Medical Center. The objectives described in the introduction of this study were applied to gather and evaluate information about the staffing process, and the level of satisfaction with the work environment at this facility.

The analysis specifically focused on the Fourth and Fifth Floor Nursing Services which demonstrated the highest numbers of vacancies. In the initial study period in September 1987, the nursing units on these two floor had 45 of the 62 vacancies reported. The collection and computation of annual vacancy rates for fiscal year 1987 demonstrated that shortages existed in certain units on the fourth and fifth floors more than in others. Specifically, these were in the critical care units 45, 46, and 49, and in the specialty wards for pediatrics (51) and neurosurgery (58). Examination of turnover within the two floors demonstrated that high annual turnover rates existed in the same areas i.e., wards 45, 46, 49, and 51.

The process of recruiting for nurses in this hospital was examined and a survey of local hospital nurse recruiters was conducted to determine the optimal strategy for recruiting nurses to fill vacant positions. A job satisfaction survey of nurses

currently working in these units was conducted to determine strategies for retaining nurses on these two floors.

The optimal strategies for improving recruitment within the Fourth and Fifth Floor Nursing Services are:

1. To continue cooperation and coordination between the Department of Nursing and the Recruitment and Placement Branch of the Civilian Personnel Office.
2. To develop external recruitment programs targeting those units that are continually hard to fill i.e. wards 45, 46, 49, 51, and 58.
3. To continue to make timely adjustments in salary and benefit packages to remain competitive with area hospitals.

The optimal strategies for improving retention of nurses within the Fourth and Fifth Floor Nursing Services are:

1. To improve existing nurse-physician relationships on the Fourth Floor Nursing Services.
2. To reduce the amount of clerical and paperwork tasks being performed by staff nurses.
3. To improve self satisfaction with the level of patient care being performed by staff nurses.
4. To establish clinical ladder programs to facilitate job advancement.

5. To allow staff nurses to input into the scheduling and staffing process on nursing units.

6. To provide for staff nurse participation in decisions that affect their work.

Recommendations

In order to improve retention and recruitment, implementation of the following measures is suggested.

Recruitment

1. Coordinators should be designated for recruitment activity within the Department of Nursing to act as representatives for the Chief Nurse in liaison with the Recruitment and Placement Branch. Efforts must be directed toward assuring that recruitment actions are submitted for valid positions and that recruitment actions are processed in a timely manner.

2. Pay and competitive benefit packages should be routinely evaluated through the use of a marketing analysis. Specifically, information provided by the studies performed by the Washington Metropolitan Nurse Recruiters Association should be used.

3. An annual recruitment plan should be developed. The plan should be based on budget resources, market analysis, analysis

of turnover and vacancies, and prioritization of nursing personnel requirements within the hospital.

4. Recruitment activity should be increased through newspaper advertisement, job fairs, and open houses. These activities should focus on the positive attributes of the organization as well as educational programs. These attributes include the competitive salaries for nurses with two years or more of experience, the differential for shift work, the use of medical technology, the teaching atmosphere, and the educational experiences offered.

5. Recruitment programs should be adjusted based on a quarterly analysis. The analysis should include the costs of these programs and the number of nurses hired through these programs.

Retention

1. Personnel interviews should be conducted in each section with nurses as they are leaving. Records of these interviews should be available in the department to provide management with current information on areas that can be improved for retention.

2. Personnel interviews should be conducted after one year of service. Managers should evaluate the need for further orientation and training, and consider information that can be used to help retain nurses for longer periods.

3. Structured interview material should be provided for each

section chief to facilitate exit interviews and questioning for tenured nurses.

4. Issues under management control solicited through interviews should be resolved.

5. Alternative staffing arrangements should be used to provide support for clerical and paperwork performed by nurses.

6. Transcription technology and computers should be used to reduce the amount of paperwork manually prepared by nurses.

7. Job titles and positions should be used to recognize civilian nurse specialization and knowledge.

8. Civilian staff nurses should be present and represented in meetings within the department and services.

9. Programs for recognition and rewards should be utilized for staff nurses to improve the level of satisfaction with job performances.

<u>The following areas are recommended for further study:</u>

1. The level of satisfaction with pay raises instituted in March 1988.

2. The current program for recognizing and rewarding the job performance of civilian staff nurses.

3. A market analysis comparing the salaries of those working in the hard to fill units (surgical intensive care, cardio-thoracic, medical intensive care, pediatrics, and neurosurgery).

4. The comparison of the levels of satisfaction with the work environment between these units and those on the Sixth and Seventh Floor Nursing Services.

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DEPARTMENT OF THE ARMY
WALTER REED ARMY MEDICAL CENTER
WASHINGTON, D.C. 20012

REPLY TO
ATTENTION OF:

HSWS-CE

4 DEC 1980

SUBJECT: Recruitment of Civilian Nurses

Commander
U.S. Army Health Services Command
ATTN: HSPE-CS
Ft. Sam Houston, TX 78234

1. The recruitment of civilian Nurses at Walter Reed Army Medical Center (WRAMC) has been an increasing problem for two (2) major reasons. First, there are approximately thirty-five (35) hospitals in the metropolitan Washington area in addition to a vast number of medical buildings, clinics, and dispensaries, offering nursing opportunities. Secondly, the rigid policy which required nurses to rotate three (3) shifts as a condition of employment.

2. It is our belief that direct hire authority would be advantageous to WRAMC. Direct hire would do much to expedite the hiring process. Frequently, nurses without status, who express a desire to work at WRAMC and who are referred to the Office of Personnel Management (OPM) for a rating, are often lost by referral to other agencies. Through our own recruitment efforts, interested Nurses are being "name requested" to OPM and eventually they are referred to us. The time lost however, in this process gives the Nurse ample time to "shop around" and when finally referred on a certificate of eligibles he/she has accepted a position elsewhere. Direct hire would give us more flexability.

3. During the fiscal year forty-four (44) Nurses resigned or transferred.

5	to other DA installations
14	to other agencies
1	was removed
3	retired
4	to accompany military spouse
1	changed fields
5	could not rotate
3	to seek other employment
8	personal reasons
44	

[redacted]CE

4 DEC 1980

[redacted]JECT: Recruitment of Civilian Nurses

4. There has not been a major problem with Nurses requesting continued education. Numerous courses are available on and off post for military and civilian nurses. In addition, there are seminars, conferences, and an Intensive Care training course which is not available in most of the other area hospitals. There is a growing concern by the Nursing administration that many Nurses who perform direct, hands on patient care are developing a "burn out syndrome," which is attributed to the acuteness of patient illness and underestimated manpower needs. It is believed that additional personnel may be needed due to the heavy physical demands placed upon the nurse at this installation.

5. Approximately 80 percent of Nurses referred on OPM registers decline offers of employment. Many declinations are due to the three rotational shift requirement and the present Nursing administration is aware of the recruitment problems. As a result, the following changes in policy have been made on a trial basis:

A. Two rotational shifts instead of three (days/evenings or days/nights)
B. A choice of specialty area assignment
C. Part-time and WAE appointments
D. Changes in interview schedules to meet the needs of the applicant. Applicants are interviewed on a walk-in basis. Interviews can also be scheduled for weekends or holidays, if this is the only available time for the applicant.
E. Advertisement in local papers.
F. A four week advance notice on schedule changes. (This policy has been in effect for some time).

The Nursing administration is wholeheartedly supporting the CPO in an effort to recruit nurses by their policy changes, availability for interviews and willingness to offer two shifts. Many of the private hospitals in this area are offerring a shift preference. There is a day Nursery for Military dependents, however, it does not open early enough to be of benefit to those eligible nurses who must report for duty at 0645. A lack of day care facilities has been a problem for all day shift workers.

6. Salaries are comparable to that paid in private hospitals. Average entrance pay is about $6.67 per hour. The Veteran Administration's hospital, however, can compete with the highest salary in the area.

7. Since the recent policy changes referred to paragraph 5, there has been an increase in prospective employees. Additional GS-11 spaces could provide an incentive for employees to remain at WRAMC as well as help in the recruitment of civilian nurses. At the present time, promotional opportunities are limited.

[redacted]C. STRONG
Civilian Personnel Officer
Civilian Personnel Office

CF:
Nursing

APPENDIX B. Survey of Local Hospital Nurse Recruiters

This survey was conducted by structured interviews with nurse recruiters at District of Columbia General Hospital (DC Gen), George Washington University Hospital (GWUH), Naval Hospital Bethesda (Bethesda), Washington Hospital Center (WHC), Fairfax Hospital (Fairfax), and the Veteran's Administration Medical Center, Washington DC (VAMC).

1. a) How many beds is this institution licensed to run?
   b) What is the average census?

2. a) How many RN positions are in the Department of Nursing?
   b) Outside the department?

3. a) How many people work to recruit nurses?
   b) What are their primary tasks?

4. What modes of communication are used to interact with Department of Nursing personnel?

   e.g.
   written correspondense and requests
   telephone conversations
   informal meetings
   formal meetings

5. How are recruiting efforts planned?

   e.g.
   as events arise
   with budget process
   on a cyclical basis weekly, monthly, or yearly

6. Are the following benefits available to RNs? If yes, please explain.

parking	health insurance
shift choice	intern/extern/precept programs
bonuses	career ladders
school/education	tuition assistance
childcare	retirement
travel/conferences	other

7. What are the four most attractive organizational feature you feel you offer potential recruits?

   a.
   b.
   c.
   d.

8. What are the four most important features or elements you feel you are lacking to be competitive with local hospitals?

   a.
   b.
   c.
   d.

9. a) What types of internal recruiting measures are used?
   b) Frequency?

eg. reassignments/promotions within the hospital
incentives to bring friends
satisfaction surveys
retention programs (explain)

10. Do you use union, civil service, school, private or public agency sources of referral? Frequency?

11. What modes of external recruitment do you use? Frequency?
    e.g.
    newspaper ads
    magazine ads
    job fairs
    open houses
    career days
    other

12. What kind of literature or gifts do you give to potential applicants?

13. How is a new recruit evaluated for hire?

14. How long does it take for an employee to start working or become involved in orientation?

15. Are there restrictions on where new graduates can be place?

16. What are your annual expenditures for nurse recruiting?

17. Do you think your budget for nurse recruitments meet your needs?

18. What is the pay structure for RNS?

    e.g.
    new graduates/ GS 7
    staff nurses/ GS 9
    clinical head nurses/ nurse specialists GS 11

19. What is the turnover rate for RNs?

20. What is the vacancy rate for RNs?

Qualification Requirements

Professional Registration Requirement

All applicants must have active, current registration as a professional *nurse in a* State, District of Columbia, the Commonwealth of Puerto Rico, or a Territory of the United States.

Exception: If you have graduated within the past 12 months from a State approved school of professional nursing, you may be appointed pending professional registration. However, you must attain registration within 6 months after appointment in order to keep your job.

Basic Education Requirements for All Nurse Positions

All Nurse positions in the Federal service require graduation from a professional school of nursing. The school must have been approved by the cognizant official accreditation body for the State, the District of Columbia, the Commonwealth of Puerto Rico or a U.S. Territory for the year of your graduation. Acceptable nursing programs include bachelor of science or higher degree programs in nursing, diploma programs in nursing, and associate degree programs in nursing.

Graduation from a school of professional nursing (including foreign schools), of at least 2 years in length other than one covered above is acceptable provided that the professional nurse training and the nursing knowledge acquired are substantially comparable and equivalent to that of graduates of an approved school as described above. Comparability should be evaluated by a State Board of Nursing. Registration as defined above meets this requirement.

Alternative: Nurse experience gained as a *military corpsman* is acceptable qualifying experience for GS-4 as long as it is accepted by a State licensing body.

Entry at GS-4 or 5

GS-4 Candidates who meet the basic education requirements described above are eligible for GS-4.

GS-5 Requirements may be met by:

1. Completion of a bachelor of science or higher degree program in nursing or a 30 month or longer diploma program in nursing or equivalent as described under basic education requirements, *or*
2. Completion of an associate's degree program or a diploma program of less than 30 months or equivalent as described under basic education requirements *and*
   a. One year of professional nursing experience, *or*
   b. One year of preprofessional experience as a licensed practical or vocational nurse or nursing assistant, provided the experience was: 1) gained under the supervision of a professional nurse, 2) equivalent to the GS-4 level or higher, and 3) relevant to the position to be filled, *or*,
   c. Successful completion of college level coursework in nursing; the behavioral, physical, or biological sciences related to nursing; nutrition; public health/community health; or maternal and child health *in excess* of the minimum basic education requirement. Such education may be substituted for the professional nursing experience required at GS-5 at the rate of 10 semester hours for 3 months of experience up to a maximum of 40 semester hours for the one year of professional nursing experience. Tutorial or remedial work cannot be credited, *or*
   d. Equivalent combinations of professional and preprofessional experience and substitutable education are acceptable.
3. Candidates qualifying on the basis of state recognized military corpsman experience can qualify for GS-5 only on the basis of one year of professional nursing experience.

Additional Experience and Education Required at GS-7 through GS-12

Candidates for grades GS-7 and above must have had either professional experience or graduate education (or an equivalent combination of both) in addition to meeting the basic educational requirements for all nurse positions. Such professional experience must have been in nursing. Such graduate education must have been in nursing with a concentration in a field of nursing (e.g., teaching, a clinical specialty, research, administration etc.) or closely related non-nursing field directly applicable to the requirements for the position to be filled.

This experience or education must have equipped the candidate with the knowledge and ability to perform fully the work of the position for which being considered.

Quality of Professional Experience

For grades GS-7 through 11 at least 6 months of the professional nursing experience must have been at the level of difficulty comparable to that of the next lower grade in the Federal service, or 1 year comparable to the second lower grade.

The applicant's total experience must give evidence of ability to perform the duties of the position. For positions at GS-9 and above, at least 1 year of the professional nursing experience

THE UNIVERSITY OF MARYLAND
SCHOOL OF NURSING

Department of PsychoPhysiological Nursing

November 4, 1987

Sally Ludwig
CPT, AN
Headquarters Administration
Walter Reed Army Medical Center
Washington, DC 20307-5001

Dear Captain Ludwig:

Thanks for your letter and your interest in my work. I have enclosed a copy of the questionnaire filled out by staff nurses who participated in my study. Questionnaires were also filled out by head nurses and by project staff. However, I no longer have those questionnaires to send out.

I hope this will be of some help to you in your study of nursing shortage and turnover.

Sincerely,

Patricia A. Prescott

Patricia A. Prescott, R.N., Ph.D.
Professor and Chair
Graduate Department of
Psycho Physiological Nursing

PAP/vkh
Encl.

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Ann Arbor, Michigan 48104
313/764-1380

February 4, 1988

Sally B. Ludwig, BSN, CPT, USA
1410 Woodman Avenue
Silver Spring, MD 20902

Dear Ms. Ludwig:

Health Administration Press grants you permission to use the survey tool in NURSES AND WORK SATISFACTION: AN INDEX FOR MEASUREMENT, by Paula L. Stamps and Eugene B. Piedmonte for your research as described in your letter of January 28. Please note the spelling of the authors' names.

Thank you for writing, and good luck with your research.

Sincerely,

Tracy Flynn
Administrative Secretary

A Division of the Foundation of the American College of Healthcare Executives

CIVILIAN STAFF NURSE QUESTIONNAIRE

Fourth and Fifth Floor Nursing Services

This survey is part of a graduate research study of retention of civilian nurses at Walter Reed Army Medical Center conducted by Sally B. Ludwig, CPT, AN, U.S. Army-Baylor Graduate Program in Health Care Administration; in association with Patricia Rikli, LTC, AN, of the Nursing Research Service, WRAMC. The purpose of the study is to gain an understanding of the importance of certain factors related to employment at Walter Reed. Completing this questionnaire implies consent to use the information provided. Your response to this questionnaire is confidential; the questionnaires will be seen only by the principal investigators.

Parts A and B from this study were taken from the survey tool in **Nurses and Work Satisfaction: An Index For Measurement**, by Paula L. Stamps and Eugene B. Piedmonte, and used with permission of the publisher, Health Care Administration Press.

We are asking you to complete this questionnaire during your regular duty hours. This should take 10-15 minutes to complete. After reading the instructions and filling in your responses, seal the survey in the attached envelope. The investigators will collect the envelopes from you. *Thank you for your help.*

Part A

Listed and briefly defined below on this sheet of paper are six terms or factors that are involved in how people feel about their work situation. Each factor has something to do with "work satisfaction". We are interested in which of these is most important to you in relation to the others.

Please carefully read the definitions for each factors as given below:

1. Pay -- dollar remuneration and fringe benefits received for work done
2. Autonomy -- amount of job-related independence, initiative, and freedom, either permitted or required in daily work activities
3. Task requirements -- tasks or activities that must be done as a regular part of the job
4. Organizational Policies -- management policies and procedures put forward by the hospital and nursing administration of this hospital
5. Interaction -- opportunities presented for both formal and informal social and professional contact during work hours
6. Professional Status -- overall importance or significance felt about your job, both in your view and in the view of others

Scoring - These factors are presented in pairs on the questionnaire that you have been given. Only 15 pairs are presented; this is every set of combinations. No pair is repeated or reversed.

For each pair of terms, decide which one is *more important* for your job satisfaction or morale. Please indicate your choice by a check on the line in front of it. For example: if you felt that Pay (as defined above) is more important than Autonomy (as defined above), check the line before Pay.

_____ Pay or _____ Autonomy

We realize it will be difficult to make choices in some cases. However, please try to select the factors which is more important to you. Please make an effort to answer every item; do not change any of your answers.

1.	_____	Professional Status	or	_____	Organizational Policies
2.	_____	Pay	or	_____	Task Requirements
3.	_____	Organizational Policies	or	_____	Interaction
4.	_____	~~Professional Status~~ TASK REQUIREMENTS		_____	Organizational Policies
5.	_____	Professional Status	or	_____	Task Requirements
6.	_____	Pay	or	_____	Autonomy
7.	_____	Professional Status	or	_____	Interaction
8.	_____	Professional Status	or	_____	Autonomy
9.	_____	Interaction	or	_____	Task Requirements
10.	_____	Interaction	or	_____	Pay
11.	_____	Autonomy	or	_____	Task Requirements
12.	_____	Organizational Policies	or	_____	Autonomy
13.	_____	Pay	or	_____	Professional Status
14.	_____	Interaction	or	_____	Autonomy
15.	_____	Organizational Policies	or	_____	Pay

Part B

The following items represent statements about satisfaction with your occupation. Please respond to each item. It may be very difficult to fit your responses into the seven categories; in that case, select the category that comes closest to your responses to the statement. It is very important that you give your honest opinion. Please do not go back and change any of your answers.

Scoring - Please circle the number that most closely indicates how you feel about each statement. The left set of numbers indicates degrees of disagreement. The right set of numbers indicates degrees of agreement. The *center* means "undecided". Please use it as little as possible. For example, if you *strongly disagree* with the first item, circle 1; if you *moderately agree* with the first statement, you would circle 6.

Remember: the more strongly you feel about the statement, the further from the center you should circle, with disagreement to the left and agreement to the right.

	Disagree						**Agree**
1. My present salary is satisfactory.	1	2	3	4	5	6	7
2. Most people do not sufficiently appreciate the importance of nursing care to patients.	1	2	3	4	5	6	7
3. The nursing personnel on my service do not hesitate to pitch in and help one another out when things get in a rush.	1	2	3	4	5	6	7
4. There is too much clerical and "paperwork" required of nursing personnel in the hospital.	1	2	3	4	5	6	7
5. The nursing staff has sufficient control over scheduling their own work shifts on my unit.	1	2	3	4	5	6	7
6. Physicians in general cooperate with nursing staff on my unit.	1	2	3	4	5	6	7
7. I feel that I am more closely supervised than is necessary.	1	2	3	4	5	6	7
8. Excluding myself, it is my impression that a lot of nursing personnel at this hospital are dissatisfied with their pay.	1	2	3	4	5	6	7
9. Nursing is a long way from being recognized as a profession.	1	2	3	4	5	6	7
10. New employees are not quickly made to "feel at home" on my unit.	1	2	3	4	5	6	7

	Disagree						Agree
11. I think I could do a better job if I did not have so much to do all the time.	1	2	3	4	5	6	7
12. There is a great gap between the administration of this hospital and the daily problems of nursing service.	1	2	3	4	5	6	7
13. I feel I have sufficient input into the program of care for each of my patients.	1	2	3	4	5	6	7
14. Considering what is expected of nursing service personnel at this hospital, the pay we get is reasonable.	1	2	3	4	5	6	7
15. There is no doubt whatever in my mind that what I do on my job is really important	1	2	3	4	5	6	7
16. There is a good deal of teamwork and cooperation between various levels of nursing personnel on my service.	1	2	3	4	5	6	7
17. I have too much responsibility and not enough authority.	1	2	3	4	5	6	7
18. There are not enough opportunities for advancement of nursing personnel at this hospital.	1	2	3	4	5	6	7
19. There is a lot of teamwork between nurses and doctors on my own unit.	1	2	3	4	5	6	7
20. On my service, my supervisors make all the decisions. I have little direct control over my own work.	1	2	3	4	5	6	7
21. The present rate of increase in pay for nursing service personnel at this hospital is not satisfactory.	1	2	3	4	5	6	7
22. I am satisfied with the types of activities that I do on my job.	1	2	3	4	5	6	7
23. The nursing personnel on my service are not as friendly and outgoing as I would like.	1	2	3	4	5	6	7
24. I have plenty of time and opportunity to discuss patient care problems with other nursing service personnel.	1	2	3	4	5	6	7
25. There is ample opportunity for civilian nursing staff to participate in the administrative decision-making process.	1	2	3	4	5	6	7
26. A great deal of independence is permitted, if not required, of me.	1	2	3	4	5	6	7
27. What I do on my job does not add up to anything really significant.	1	2	3	4	5	6	7
28. There is a lot of "rank consciousness" on my unit. Nursing personnel seldom mix with anyone of lower rank.	1	2	3	4	5	6	7
29. I have sufficient time for direct patient care.	1	2	3	4	5	6	7
30. I am sometimes frustrated because all of my activities seem programmed for me.	1	2	3	4	5	6	7
31. I am sometimes required to do things on my job that are against my better professional nursing judgement.	1	2	3	4	5	6	7
32. From what I hear from and about nursing service personnel at other hospitals, we at this hospital are being fairly paid.	1	2	3	4	5	6	7
33. Administrative decisions at this hospital interfere too much with patient care.	1	2	3	4	5	6	7
34. It makes me proud to talk to other people about what I do on my job.	1	2	3	4	5	6	7
35. I wish the physicians here would show more respect for the skill and knowledge of the nursing staff.	1	2	3	4	5	6	7
36. I could deliver much better patient care if I had more time with each patient.	1	2	3	4	5	6	7
37. Physicians at this hospital generally understand and appreciate what the nursing staff does.	1	2	3	4	5	6	7
38. If I had the decision to make all over again, I would still go into nursing.	1	2	3	4	5	6	7

	Disagree						Agree
39. The physicians at this hospital look down too much on the nursing staff.	1	2	3	4	5	6	7
40. I have all the voice in planning policies and procedures for this hospital and my unit that I want.	1	2	3	4	5	6	7
41. My particular job really doesn't require much skill or "know-how".	1	2	3	4	5	6	7
42. The nursing administrators generally consult with the staff on daily problems and procedures.	1	2	3	4	5	6	7
43. I have all the freedom in my work to make important decisions as I see fit, and can count on my supervisors to back me up.	1	2	3	4	5	6	7
44. An upgrading of pay schedules for nursing personnel is needed at this hospital.	1	2	3	4	5	6	7

Part C

1. On what unit do you work? *(Fill in unit name or number)*

   Unit _____

2. How long have you been employed at Walter Reed? *(Fill in)*

   _____ years _____ months

3. What is the total amount of time you have worked as an RN? *(Include all registered nurse time since graduation from basic RN program)*

   _____ years _____ months

4. Check the type of basic nursing program you attended and fill in the year graduated.

Program Type	Year Graduated
Diploma _____	19____
Associate Degree _____	19____
Baccalaureate_____	19____

5. In what year were you born? *(Fill in)*

   19____

6. Do you expect to be working at this hospital a year from now? *(Check one)*

   _____yes _____no

12

Appendix F. Frequency Matrix of Responses to Paired Comparisons

Hard to Fill Areas—Wds 45,46,49,51,58

MOST FAVORED

n=09

LEAST FAVORED	Pay	Autonomy	Task Requirements	Organizational Policies	Professional Status	Interaction
Pay	—	6	3	1	4	3
Autonomy	3	—	2	2	6	3
Task Requirements	6	7	—	1	7	5
Organizational Policies	8	7	8	—	8	6
Professional Status	5	3	2	1	—	5
Interaction	6	6	4	3	4	—

Total—Fourth and Fifth Floor Nursing Units

MOST FAVORED

n=36

LEAST FAVORED	Pay	Autonomy	Task Requirements	Organizational Policies	Professional Status	Interaction
Pay	—	17	9	3	15	12
Autonomy	19	—	8	9	17	15
Task Requirements	27	28	—	6	25	19
Organizational Policies	33	27	30	—	32	27
Professional Status	21	19	11	4	—	17
Interaction	24	21	17	9	19	—

PROPORTION MATRIX

Hard to Fill Areas—Wds 45,46,49,51,58

MOST FAVORED N=09

LEAST FAVORED	Pay	Autonomy	Task Requirements	Organizational Policies	Professional Status	Interaction
Pay	—	.667	.333	.111	.444	.333
Autonomy	.333	—	.222	.222	.667	.333
Task Requirements	.667	.778	—	.111	.778	.556
Organizational Policies	.889	.778	.889	—	.889	.667
Professional Status	.556	.333	.222	.111	—	.556
Interaction	.667	.667	.444	.333	.444	—

Total—Fourth and Fifth Floor Nursing Units

MOST FAVORED N=36

LEAST FAVORED	Pay	Autonomy	Task Requirements	Organizational Policies	Professional Status	Interaction
Pay	—	.472	.250	.083	.417	.333
Autonomy	.528	—	.222	.250	.472	.417
Task Requirements	.750	.778	—	.167	.694	.528
Organizational Policies	.917	.750	.833	—	.889	.750
Professional Status	.583	.528	.306	.111	—	.472
Interaction	.667	.583	.472	.250	.528	—

APPENDIX G

Z MATRIX SHOWING COMPONENT WEIGHT COEFFICIENT

Most Favored N=36

Least Favored	Organizational Policies	Task Requirements	Interaction	Autonomy	Professional Status	Pay
Org. Pol.	---	0.978	0.678	0.678	1.221	1.385
Task Req.	-0.966	---	0.070	0.765	0.510	0.678
Interact.	-0.674	-0.068	---	0.212	0.212	0.430
Autonomy	-0.674	-0.765	-0.210	---	-0.068	0.070
Prof.Stat	-1.122	-0.570	-0.133	0.070	---	0.212
Pay	-1.385	-0.674	-0.432	-0.068	-0.210	---
Sum	-4.821	-1.107	-0.027	1.657	1.665	2.775
Mean	-0.803	-0.185	-0.005	0.276	0.278	0.463
Component Wt. Coeff	2.297	2.916	3.095	3.376	3.378	3.563

Z MATRIX SHOWING COMPONENT WEIGHTING COEFFICIENT --Hard to Fill Areas
WDs 45, 46, 49, 51, 58

Most Favored N=09

Least Favored	Pay	Autonomy	Task Requirements	Organizational Policies	Professional Status	Interaction
Pay	---	0.432	-0.432	-1.221	-0.141	-0.432
Autonomy	-0.432	---	-0.765	-0.765	0.432	-0.432
Task Req	0.432	0.800	---	-1.221	0.800	0.141
Org. Pol	1.221	0.800	1.221	---	1.221	0.432
Prof.Stat	0.141	-0.432	-0.765	-1.221	---	0.141
Interact	0.432	0.432	-0.141	-0.432	-0.141	---
Sum	1.784	2.329	-0.882	-4.860	2.171	-0.150
Mean	0.297	0.388	-0.147	- .810	0.362	-0.025
Component Wt. Coeff	3.100	3.488	2.953	2.290	3.462	3.075

APPENDIX 6 Z MATRIX SHOWING COMPONENT WEIGHTING COEFFICIENT—Fourth Floor

Most Favored N=24

Least Favored	Organizational Policies	Task Requirements	Interaction	Autonomy	Professional Status	Pay
Org. Pol.	---	0.834	0.656	0.693	1.443	1.433
Task Req.	-0.966	---	0.116	0.116	0.994	0.834
Interact.	-0.674	-0.095	---	0.445	0.222	0.445
Autonomy	-0.668	-0.806	-0.423	---	0.010	-0.095
Prof.Stat	-1.379	-0.962	-0.202	0.010	---	0.116
Pay	-1.379	-0.806	-0.423	0.116	-0.095	---
Sum	-5.066	-1.835	-0.276	1.380	2.564	2.733
Mean	-0.944	-0.306	-0.046	0.230	0.427	0.456
Component Wt. Coeff	2.256	2.794	3.054	3.330	3.527	3.556

Z MATRIX SHOWING COMPONENT WEIGHTING COEFFICIENT—Fifth Floor

Most Favored N=12

Least Favored	Organizational Policies	Task Requirements	Interaction	Autonomy	Professional Status	Pay
Org. Pol.	---	1.359	0.954	0.665	0.954	1.359
Task Req.	-1.385	---	-0.005	0.665	-0.215	0.423
Interact.	-0.970	-0.005	---	-0.215	-0.212	0.423
Autonomy	-0.678	-0.678	-0.204	---	0.954	0.423
Prof.Stat	-0.970	-0.204	0	-1.385	---	0.423
Pay	-1.385	-0.434	-0.434	-0.434	-0.434	---
Sum	-5.388	0.038	0.311	-0.704	1.047	3.059
Mean	-0.898	0.006	0.052	-0.117	0.175	0.509
Component Wt. Coeff	2.202	3.106	3.152	2.983	3.275	3.609

Appendix H. Hospital Based Registered Nurse Staff Studies

n=	Respondents	Autonomy	Pay	Professional Status	Interation	Task Requirements	Organizational Policies
193	4 community nospitals	1	2	3	4	5	6
134	2 acute care hospitals	1	2	3	4	5	6
138	VA and county hospital	1	2	3	4	5	6
450	community hospital	1	3	2	5	4	6
100	community hospital	1	2	3	5	4	6
132	teaching hospital	3	2	1	4	5	6
98	VA Medical Center	2	1	4	3	5	6

Source: Stamps and Piedmonte, 35.

APPENDIX I ATTITUDE SCALE

FOURTH FLOOR

CODE #	1	2	3	4	5	6	7	8	9	10	11	14	15	16	19	20	21	22	39	40	12	13	17	18	23	24	25	38	41
PAY																													
1	1	2	1	4	1	2	1	4	1	1	3	1	1	6	2	3	3	5	2	2	5	1	1	6	5	1	2	3	1
8	1	2	1	5	1	3	2	3	1	2	2	1	3	4	1	2	1	2	1	2	2	5	7	6	1	1	1	1	2
14	1	2	1	3	1	2	1	2	2	1	3	1	2	6	1	2	4	2	1	1	3	2	1	5	1	1	1	1	1
21	1	1	1	3	2	2	2	2	1	1	2	1	5	1	2	2	4	2	1	2	4	3	3	6	2	1	2	5	4
32	1	2	1	3	1	1	1	2	1	1	1	1	2	4	1	2	5	4	1	3	1	5	1	6	6	1	2	1	2
44	1	1	1	2	1	1	1	2	1	1	1	1	3	1	1	2	3	1	1	2	2	1	1	5	1	1	1	1	1
PROFESSIONAL STATUS																													
2	1	3	6	5	4	5	2	6	6	7	3	6	6	5	5	6	6	6	6	6	6	6	5	6	4	7	2	7	6
9	6	3	3	3	1	2	5	2	6	2	5	4	5	2	6	3	1	2	2	2	4	2	7	2	3	7	2	3	4
15	7	7	7	3	7	6	7	6	7	7	6	6	5	7	6	6	7	7	6	5	7	6	7	3	7	7	7	7	5
27	7	4	5	7	6	2	7	7	7	7	6	4	7	1	6	6	2	7	5	5	6	5	7	2	5	1	7	7	5
34	7	6	5	3	5	7	6	6	6	7	6	4	5	4	7	5	7	6	3	5	6	3	7	2	5	7	6	5	3
38	1	3	6	1	5	7	6	4	4	4	7	1	5	4	3	1	3	6	1	6	7	1	4	1	5	1	7	5	3
41	7	7	7	6	7	7	6	7	7	7	7	7	7	7	6	7	7	7	7	6	7	7	7	7	7	7	7	7	6
INTERACTIONS																													
3	7	3	5	5	1	4	6	3	4	4	4	7	5	6	7	6	6	6	5	5	7	5	2	2	7	7	7	7	6
10	1	2	1	5	7	3	6	3	6	5	5	7	5	6	6	3	2	6	3	6	2	2	6	1	5	7	7	5	3
16	7	2	1	3	7	4	4	2	7	4	5	7	2	1	6	5	6	6	2	5	6	3	2	1	6	7	5	1	3
23	1	1	1	4	7	6	6	5	5	5	4	7	5	5	4	6	2	7	3	7	7	2	3	2	3	1	7	7	6
28	7	1	1	2	2	2	2	3	4	5	5	7	2	6	7	3	3	6	3	3	1	2	7	1	6	7	6	7	6
6	7	6	1	3	1	4	5	3	3	6	4	7	5	6	7	3	5	5	2	6	4	3	5	6	5	2	6	7	4
19	7	6	1	5	1	2	6	3	6	7	4	6	5	6	7	3	5	5	2	5	.5	3	5	6	5	5	6	7	2
35	1	5	1	2	1	2	3	2	2	3	3	7	3	2	4	2	2	2	5	4	6	5	2	3	2	1	3	3	2
37	7	6	2	5	7	5	4	3	3	4	5	7	3	5	7	4	5	5	6	3	4	6	5	6	5	5	6	5	3
39	7	5	1	5	6	4	3	5	5	5	5	7	3	5	7	3	3	4	3	6	4	4	5	4	3	1	6	4	3
TASK REQUIREMENTS																													
4	1	1	1	2	1	2	2	2	7	1	2	2	3	2	5	1	1	2	1	1	3	1	2	7	1	1	3	3	1
11	7	2	2	3	7	2	2	2	2	2	5	3	3	6	4	3	2	2	2	5	5	2	2	6	1	1	2	3	3
22	7	6	2	5	6	5	5	5	6	3	6	7	6	6	3	3	6	6	3	4	6	3	6	3	5	7	5	3	6
24	7	2	1	3	4	2	2	3	3	3	4	1	5	4	5	3	4	4	1	5	1	1	2	1	3	5	2	2	2
29	6	6	1	3	6	3	3	6	3	2	3	6	5	6	6	6	2	2	3	3	3	3	3	1	5	3	6	5	2
36	7	4	2	2	5	1	1	2	2	1	1	3	3	3	4	3	2	2	1	2	6	1	1	2	1	1	3	3	3

APPENDIX I ATTITUDE SCALE

FOURTH FLOOR

ORGANIZATIONAL POLICY	1	2	3	4	5	6	7	8	9	10	11	14	15	16	19	20	21	22	39	40	12	13	17	18	23	24	25	38	41
5	1	3	1	1	1	4	3	3	3	6	4	1	6	7	5	3	6	5	1	3	1	1	1	1	1	1	1	2	1
12	1	1	1	2	1	2	4	2	5	3	3	1	2	3	2	2	4	2	2	2	1	2	5	2	2	1	2	5	2
18	1	1	2	2	1	2	3	2	1	2	2	1	3	2	1	2	2	2	1	1	7	1	1	2	2	1	2	1	1
25	1	1	1	2	1	2	2	2	2	1	3	2	2	1	2	3	4	2	2	2	4	1	2	1	3	1	2	3	2
33	7	3	2	2	4	2	3	5	5	3	4	2	3	4	4	2	5	3	5	3	3	5	2	4	1	7	6	4	5
40	1	2	1	3	1	3	2	3	3	5	2	4	3	4	5	3	6	4	3	3	3	3	1	1	5	1	2	5	3
42	1	1	5	2	1	4	4	1	4	6	3	1	2	6	2	3	6	5	3	5	2	3	1	5	1	6	5	6	6
AUTONOMY																													
7	7	1	4	4	7	4	6	6	5	7	6	7	7	7	6	6	1	6	2	5	6	1	7	7	6	4	7	5	4
13	7	2	2	5	5	6	4	6	4	5	4	6	6	7	6	5	6	6	3	5	5	3	6	6	6	5	5	4	6
17	7	2	2	3	3	2	5	3	2	5	5	2	5	6	4	5	4	4	2	3	4	2	1	1	3	3	2	4	2
20	6	1	3	2	1	4	6	3	3	6	6	5	5	6	5	5	3	5	2	3	5	2	6	6	1	4	6	6	2
26	7	2	1	2	3	3	5	2	2	6	5	1	6	6	6	6	4	7	6	6	2	7	3	3	5	4	6	5	5
30	1	5	3	3	5	4	3	3	5	6	3	7	6	6	4	5	4	5	4	4	7	2	6	6	5	3	5	2	4
31	1	6	3	4	7	2	6	6	2	3	6	7	6	6	7	5	3	4	4	5	6	3	2	2	6	5	6	4	3
43	1	1	2	3	1	3	4	2	4	6	4	2	6	7	3	3	5	5	3	3	3	1	1	1	4	1	6	5	5

APPENDIX I ATTITUDE SCALE

FIFTH FLOOR

	26	28	29	30	31	32	33	34	35	36	42	37	27
PAY													
1	4	3	4	5	5	1	2	2	1	4	2	6	1
8	4	6	2	4	3	1	2	6	1	4	1	2	1
14	4	1	2	5	2	1	1	2	2	3	1	2	1
21	1	1	3	4	3	1	4	3	5	4	3	1	1
32	3	1	4	4	3	1	2	2	1	4	3	1	2
44	1	1	4	1	3	1	1	2	1	2	1	1	1
PROFESSIONAL STATUS													
2	6	6	4	1	6	7	7	7	2	6	7	7	6
9	2	5	4	7	2	1	2	2	6	2	5	4	2
15	6	7	6	7	7	7	4	6	7	6	7	7	7
27	7	7	3	4	7	7	3	6	7	7	6	7	7
34	5	5	4	6	5	6	2	5	7	6	6	7	7
38	7	1	7	4	2	7	1	7	7	2	6	7	2
41	7	7	7	5	7	7	6	6	7	7	7	7	7
INTERACTIONS													
3	5	2	6	6	6	5	3	1	7	6	7	6	3
10	7	2	6	4	6	7	2	4	6	6	5	7	6
16	5	1	6	6	6	5	3	2	6	6	6	7	7
23	2	5	5	6	6	7	3	6	7	6	2	7	6
28	2	5	5	5	7	7	2	1	7	6	2	7	5
6	7	1	6	7	5	3	7	2	7	5	3	7	5
19	7	1	5	6	6	5	2	2	6	5	3	4	7
35	7	1	4	3	6	1	2	6	6	3	3	4	3
37	6	1	6	4	6	4	5	3	6	3	4	6	5
39	7	1	7	4	6	5	3	6	7	5	5	7	3
TASK REQUIREMENTS													
4	2	1	2	1	3	1	3	2	1	1	2	1	1
11	2	2	5	4	2	3	3	6	6	3	5	6	6
22	4	6	5	5	3	4	3	6	7	4	3	7	6
24	4	1	4	5	5	3	3	5	7	1	3	3	6
29	5	1	5	7	1	3	2	6	2	2	3	7	6
36	4	1	1	3	1	1	2	3	2	1	1	4	5

APPENDIX I ATTITUDE SCALE

FIFTH FLOOR

ORGANIZA	26	28	29	30	31	32	33	34	35	36	42	37	27
POLICY													
5	3	2	3	1	3	3	1	1	2	5	2	1	2
12	2	2	2	4	2	2	4	2	6	3	5	3	2
18	2	1	1	4	1	2	1	3	1	1	2	1	1
25	6	1	3	5	3	2	2	2	1	1	3	1	1
33	4	3	3	4	3	3	4	4	7	3	3	4	3
40	6	1	2	3	1	1	3	2	1	3	2	1	3
42	5	1	1	4	2	2	6	2	1	1	3	4	3
AUTONOMY													
7	7	5	3	6	6	3	7	4	6	6	6	7	7
13	7	1	6	6	6	5	7	6	7	2	4	6	7
17	4	2	3	4	5	3	3	2	6	3	3	7	6
20	7	2	7	4	5	7	2	2	7	5	6	5	6
26	3	1	4	4	6	6	1	2	3	5	6	7	6
30	4	2	5	5	3	5	2	6	7	4	7	7	6
31	2	5	7	2	5	1	4	6	7	6	5	7	7
43	7	1	3	7	6	3	2	2	6	6	1	7	6

APPENDIX I ATTITUDE SCALE

	HARD TO FILL AREAS										
	37	12	13	17	18	23	24	25	26	38	41
PAY											
1	6	5	1	1	6	5	1	2	4	3	1
8	2	2	5	7	6	1	1	1	4	1	2
14	2	3	2	1	5	1	1	1	4	1	1
21	1	4	3	3	6	2	1	2	1	5	4
32	1	1	5	1	6	6	1	2	3	1	2
44	1	2	1	1	5	1	1	1	1	1	1
PROF. STATUS											
2	7	6	6	5	6	4	7	2	6	7	6
9	4	4	2	7	2	3	7	2	2	3	4
15	7	7	6	7	3	7	7	7	6	7	5
27	7	6	5	7	2	5	1	7	7	7	5
34	7	6	3	7	2	5	7	6	5	5	3
38	7	7	1	4	1	5	1	7	7	5	3
41	7	7	7	7	7	7	7	7	7	7	6
INTERACTIONS											
3	6	7	5	2	2	7	7	7	5	7	6
10	7	2	2	6	1	5	7	7	7	5	3
16	7	6	3	2	1	6	7	5	5	1	3
23	7	7	2	3	2	3	1	7	2	7	6
28	7	1	2	7	1	6	7	6	2	7	6
6	7	4	3	5	6	5	2	6	7	7	4
19	4	5	3	5	6	5	5	6	7	7	2
35	4	6	5	2	3	2	1	3	7	3	2
37	6	4	6	5	6	5	5	6	6	5	3
39	7	4	4	5	4	3	1	6	7	4	3
TASK REQUIREMENTS											
4	1	3	1	2	7	1	1	3	2	3	1
11	6	5	2	2	6	1	1	2	2	3	3
22	7	6	3	6	3	5	7	5	4	3	6
24	3	1	1	2	1	3	5	2	4	2	2
29	7	3	3	3	1	5	3	6	5	5	2
36	4	6	1	1	2	1	1	3	4	3	3

APPENDIX I ATTITUDE SCALE

HARD TO FILL AREAS

ORG	37	12	13	17	18	23	24	25	26	38	41
POLICY											
5	1	1	1	1	1	1	1	1	3	2	1
12	3	1	2	5	2	2	1	2	2	5	2
18	1	7	1	1	2	2	1	2	2	1	1
25	1	4	1	2	1	3	1	2	6	3	2
33	4	3	5	2	4	1	7	6	4	4	5
40	1	3	3	1	1	5	1	2	6	5	3
42	4	2	3	1	5	1	6	5	5	6	6
AUTONOMY											
7	7	6	1	7	7	6	4	7	7	5	4
13	6	5	3	6	6	6	5	5	7	4	6
17	7	4	2	1	1	3	3	2	4	4	2
20	5	5	2	6	6	1	4	6	7	6	2
26	7	2	7	3	3	5	4	6	3	5	5
30	7	7	2	6	6	5	3	5	4	2	4
31	7	6	3	2	2	6	5	6	2	4	3
43	7	3	1	1	1	4	1	6	7	5	5